NEW EQUIPMENT DIGEST

A Penton Publication

October, 1958

Volume 23—Number 10

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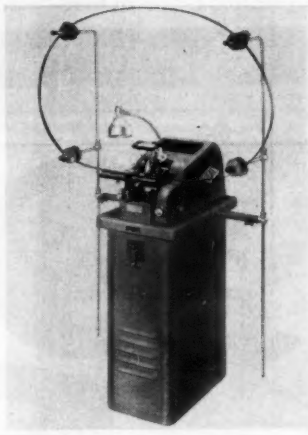
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 8 and 104

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

BAND SAW SHARPENER
for ¾ to 2-in. wide blades



Attachment for the Hamco saw sharpening machine adapts it for the automatic sharpening of band saw blades from ¾ to 2 in. wide. The rack for the saw blade can be extended in a horizontal or vertical position directly above the machine (see photo). By relocating the back guide bar, the guide table will accept blades of various sizes. Sharpening settings for a specific job can be recorded for future reproduction. Machine can also sharpen circular saw blades up to 16-in. diameter and hack saw blades up to 2 x 24 in. Made by **Hamco Machines, Inc.**, Dept. R, 99 Mt. Hope Ave., Rochester 20, N. Y.

▲ For more details circle **NED-1 K8** on enclosed inquiry slip ▲

JACK PLATFORM TRUCK
handles up to 4000-lb loads

Savings in time, space, and equipment are attributed to this No. 580 4000-lb capacity jack platform truck for handling raw materials, workpieces, parts, or finished goods. One jack handle serves a number of platforms, which stack compactly when not in use. Small turning radius permits use in narrow aisles or confined space. Semisteel, rubber, or Lamilon plastic wheels are available, as are 48 x 30-in., 60 x 30-in., and 72 x 36-in. platforms. Made by **Fairbanks Co.**, Dept. 43, 395 Lafayette St., New York 3, N. Y.

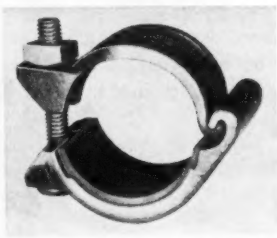
▲ For more details circle **NED-2 K8** on enclosed inquiry slip ▲

RUBBER TAPE SAMPLE KIT
allows user evaluation of 6 types

This silicone rubber evaluation kit enables potential rubber tape users to evaluate three standard and three new silicone rubber tapes for any application. DL 68 silicone rubber armor tape, one of the three new tapes, is a single coated glass cloth with self-bonding silicone rubber and is used as an outer wrap. DL 69, made of glass cloth coated on both sides with rubber, is a Class H insulating material. It needs no interliner and can be used for insulating motor coils, cable and hook-up wire. DL 70 conformable, double-side coated Dacron glass cloth tape has high tensile strength, good abrasion resistance, and is fully vulcanized. Packed in a sturdy box, kit also includes an index and swatch card which lists specifications of all Permacel silicone rubber tapes and suggests uses. Kit is sold by **Permacel**, Dept. E, New Brunswick, N. J.

▲ For more details circle **NED-3 K8** on enclosed inquiry slip ▲

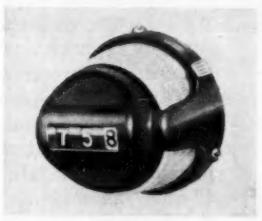
EMERGENCY PIPE CLAMP
quickly installed on 2-in. pipe



Malleable iron Junior emergency pipe clamp has a full length hinge along one side and a single plated bolt on the other side. It is 2⅞ in. wide. A lug on the lower half is slotted for quick bolting. The cemented-in gasket covers the entire bottom half. The quickly installed unit is available for 2-in. pipe at present and will be offered for 2½ and 3-in. sizes shortly. Made by **M. B. Skinner Co.**, Dept. PS, 3502 W. Sample St., South Bend 21, Ind.

▲ For more details circle **NED-4 K8** on enclosed inquiry slip ▲

THREE-DIGIT DIAL
is lightweight, direct-reading knob



Usable where weight is a factor, this three-digit direct-reading Model 1310 Microdial has an aluminum control knob and is available in a ten-turn version only. A finger-tip brake which locks settings is optional if desired. Large easy-to-read black numbers on a white background, curved window for wide-angle viewing, and simple mounting on shaft by tightening an Allen set screw are features. Made by **George W. Borg Corp.**, Borg Equipment Div., 120 S. Main St., Janesville, Wis.

▲ For more details circle **NED-5 K8** on enclosed inquiry slip ▲

HIGH STRENGTH CAP SCREW
wrenching, bearing areas increased

Capable of meeting demands for high strength and load-carrying capacity, Pre-Lode socket head cap screws have increased wrenching area and enlarged bearing surface. Indentation of bolted materials is minimized because load is distributed uniformly over larger area. Cap screws are available in all standard sizes from ¼ to 1 in. and are marked for easy identification. Made by **General American Transportation Co.**, Parker-Kalon Div., 2 Peekay Dr., Clifton, N. J.

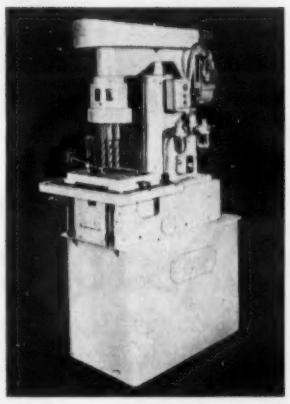
▲ For more details circle **NED-6 K8** on enclosed inquiry slip ▲

STRUCTURAL RAIL FITTINGS
for railings, braces, and supports

Adjustable tee (shown) and an adjustable flange are two additions to Speed-Rail structural fittings line which facilitate the construction of stairway railings and angled braces and supports. Made of high tensile, noncorrosive aluminum alloy, they swivel 180 deg. No threading or welding and a minimum of pipe cutting are needed. All pipe and fittings are salvageable. Made by **Hollaender Mfg. Co.**, 3837 Spring Grove Ave., Cincinnati 23, Ohio.

▲ For more details circle **NED-7 K8** on enclosed inquiry slip ▲

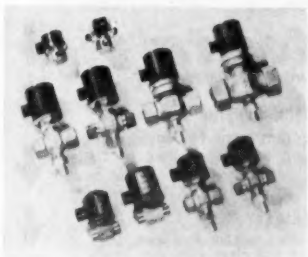
DRILLING & TAPPING MACHINE
22-in. unit has 2000-lb thrust



Larger work and heavier sections as well as a wider variety of materials can be drilled on this 22-in. Air-Oil feed drilling machine, successor to the 14-in. machine. It develops up to 2000-lb thrust on 80-psi air fed to the 6-in. cylinder. Machine mounts a 215-frame motor rated from 1½ hp at 870 rpm to 5 hp at 3500 rpm. Controlled or slow feed can be adjusted from zero to 6 in. Adjustable stops can be set to use any total length of stroke desired. Made by **Zagar, Inc.**, 23880 Lakeland Blvd., Cleveland 23, Ohio.

▲ For more details circle **NED-8 K8** on enclosed inquiry slip ▲

SOLENOID VALVES
for all types of fluid service



Line of solenoid valves includes the Model 291 which is designed for use in tight equipment corners. Available in either brass or stainless, this two-way valve is made in six orifice sizes and can be used for air, gas, water, and oil service. Model 271, 272, 273, and 274 valves are designed for main liquid line control on multiple cooling systems as well as by-pass uses to prevent motor overload during starting periods. Four basic bronze models provide four orifice sizes. Models 67 and 73 are multipurpose solenoids featuring brass bodies, silent operation, and moisture and frost-resistant coils. Made by **Controls Co. of America**, 9570 Soreng Ave., Schiller Park, Ill.

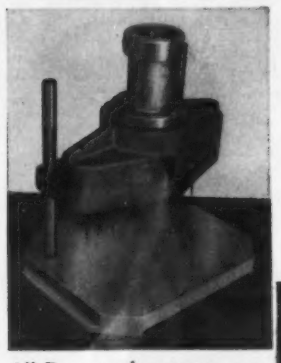
▲ For more details circle **NED-9 K8** on enclosed inquiry slip ▲

HIGH VACUUM GAGE
covers 2500 to 1 micron range

Direct and continuous indication of total pressure at either of two points is given by Model 521 high vacuum thermocouple gage which covers a range of 2500 to 1 microns absolute. Response time from 1 to 1000 microns is less than 3 sec. Unit withstands a 20-ft drop to a concrete floor and is unharmed by operation at pressures up to 60 psi. Pressure scale on two-station Model 721 gage control reads directly in microns. A filament current scale is calibrated in milliamperes. It requires less than 6 w of 115 v 60-cycle power and weighs less than 6 lb. Gages are used on vacuum drying, lamp exhaust, impregnation, leak detecting, or thermometer filling systems. Made by **NRC Equipment Corp.**, Dept. 29NR, 160 Charlemont St., Newton Highlands 61, Mass.

▲ For more details circle **NED-10 K8** on enclosed inquiry slip ▲

FOR STRAIGHT-LINE DRILLING, REAMING, TAPPING,



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▲ For more details circle NED-12 K8 on enclosed inquiry slip ▲

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What Will Product Publicity Do?

"Product Publicity" is a subject of major interest to practically all manufacturers of industrial equipment and materials. One of the first questions asked is, "What will product publicity do for me?" Here are some of the more prominent objectives of properly handled news releases on new or improved products. When published, they serve to:

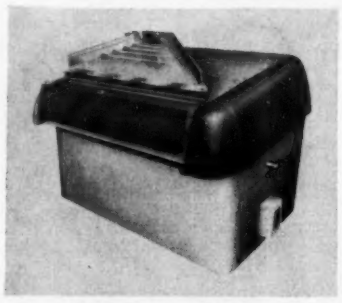
1. Introduce a new product.
2. Locate wholly new markets or uses other than that for which the product was originally developed.
3. Determine the market potential of a product.
4. Present the product to men who are practically impossible to contact personally . . . "go over heads" without offense.
5. Present the product in plants that are difficult to reach geographically, or where a sales call would not be economically feasible.
6. Produce sales leads from specifiers in industry who have need for a specific product.
7. Get actual orders by mail, direct from readers.

Since we have been on the receiving end of product publicity for years, we are in a position to suggest ways in which a new product release can best be prepared. If you have any specific problems or need help, just drop me a note.

A. N. Gregg
EDITOR

NEW EQUIPMENT DIGEST
724 Penton Building
Cleveland 13, Ohio

GRANULAR SEPARATOR
for lab or continuous commercial use



Laboratory size V-135 Air-Float Table is adaptable for both product research and for continuous commercial processing involving separation, salvage, and up-grading of dry granular materials. Unit operates on the fluidization technique and has a high degree of sensitivity and the ability to produce a continuous separation spectrum. Classification is made by particle size, shape, or specific gravity. The ¾-hp, 115-v unit weighs only 225 lb, operates quietly, and requires no foundation or bolting down. Over-all size is 23½ x 34 x 24 in. Made by Sutton, Steele & Steele, Inc., Dept. ED, 1031 S. Haskell, Dallas 23, Tex.

▲ For more details circle NED-14 K8 on enclosed inquiry slip ▲

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Up to 3" Working Distance—Wide 3 Dimensional Field—Used in production, in research, or at home; for inspections, examinations, counting, checking, assembling, dissecting, speeding up and improving quality control. 2 sets of objectives on rotating turret. Standard pair of wide field 10X Kellner Eyepieces give you 23 power and 40 power clear, sharp, erect image. Helical rack and pinion focusing. Interpupillary distance adjustable. WE WILL SHIP ON 10-DAY FREE TRIAL. **Stock No. 85,056-AE—full price, $99.50 f.o.b. Barrington, N.J. Low Power Supplementary Lens Attachment for above Stereo—provides 15X down to 5X with clear, extra large 1½" field at 6X. Stock #30,276-AE ..... $7.50 Order by Stock No. Send Check or M.O.—or order on open account.**

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MEASURES • Angles • Radii • Circles • Linear—in both decimal inches and millimeters. Used to check layouts, machining on tools, dies, gauges; to check threads, chamfers, wear on cutting tools, etc.

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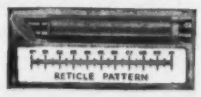
Fountain pen size, makes direct reading measurements; for checking small parts and dimensions under powerful magnification. Precision, glass etched reticle calibrated for measurements up to 1/10" by .001" divisions.



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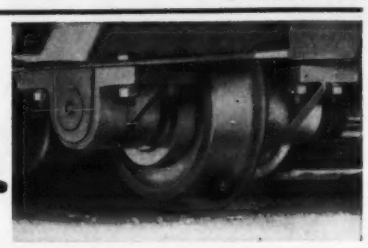
Keep 'em OFF the siding!.. install **IRWIN** Packaged-Wheel ASSEMBLIES



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• IRWIN Packaged-Wheel Assemblies are designed and built to absorb shocks and crushing impacts for all conventional cars up to 25-ton capacity with 10" to 20" standard diameter wheels. IRWIN Assemblies are available for higher capacity equipment with greater wheel size.

• IRWIN Packaged-Wheel Assemblies are equipped with Timken roller bearings for applications up to 250°F. A special high temperature series is available for applications up to 950°F.

• IRWIN Packaged-Wheel Assemblies are bolted to the car. Before shipping, each Assembly is carefully fitted, adjusted, tested, greased and painted. Periodic greasing is only maintenance requirement.

We also manufacture flat tread, tapered tread and double-flanged wheel assemblies for rotary hearths, cranes and special operational equipment.

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IRWIN

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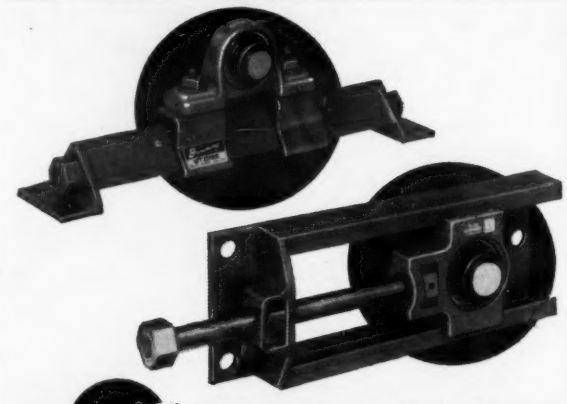

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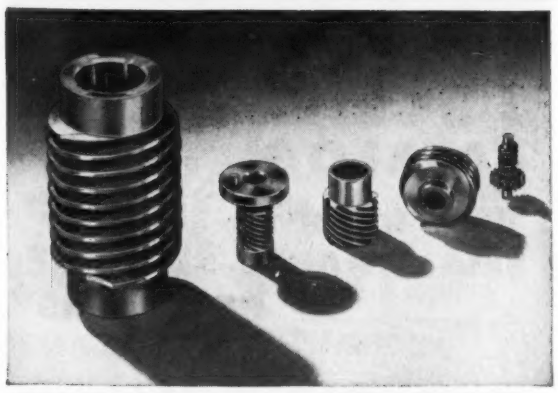

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For more details circle NED-19 K8 on enclosed inquiry slip

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For more details circle NED-20 K8 on enclosed inquiry slip

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New throttling-type, pneumatic, recording temperature control, provides accurate control and proves it — in writing.
Also available in Indicating Model

NEW...

Partlow Pneumatic Temperature Control

Developed to handle a broad range of heating appliances, the new Partlow throttling-type pneumatic control couples the powerful, direct action of mercury with the equally simple, direct action of an air-operated valve system. Accurate . . . to within 1% of scale range in any one of 10 optional ranges from -30° to 1100° F. Flexible . . . with throttling range adjustable at from 3 to 20% of scale range. Sensitive . . . positive, hair-trigger response. Rugged: Explosion-Proof . . . no tubes or electronic gadgets to get out of order . . . And requires only one-crew maintenance.

Field-test this superb, new instrument without cost or obligation. For details write Dept. N-1058.
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You can pay more but you can't buy better than
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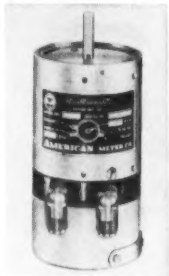
TEMPERATURE CONTROLS

For more details circle NED-21 K8 on enclosed inquiry slip

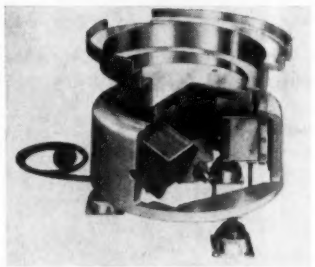
INSTRUMENT DRIVE & TIMER
self-contained, air or gas powered



Constant power output, reportedly over 20 times that of spring-wound clock mechanisms, is delivered by the Gasclok, a self-contained air or gas-powered instrument drive and timing unit. It can be used as original or replacement equipment in all recording instruments requiring chart records from 1-hr to 30-day periods. The self-starting power drive is explosionproof and internally sealed to prevent corrosion or clogging. All parts exposed to gas are aluminum or stainless steel. Gas or air consumption is 5 cfh at normal operating pressure of 5 psi. Designed for mounting in any position, the timing escapement spring is rewound every 5 sec. Accuracy is not affected by wide supply pressure fluctuations. Made by **American Meter Co.**, Dept. P, 920 Payne Ave., Erie, Pa.

For more details circle NED-22 K8 on enclosed inquiry slip

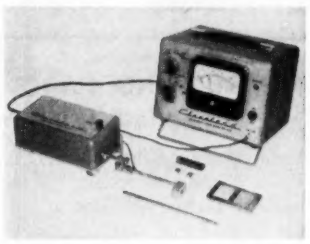
VIBRATING FEEDERS
orient and deliver standard parts



Use of three or more VibroBlock magnetic motors for energizing these adjustable feeders enables them to orient and deliver standard parts, plus many hard-to-handle parts. Mounting angle of the VibroBlocks is easily adjusted so that the horizontal and vertical components of vibration may be varied to best suit the part being fed. Feed speeds can be up to 80 fpm. Wide variety of bowls and transportation rails is available to handle the parts. Made by **Arthur G. Russell Co.**, Forestville, Conn.

For more details circle NED-23 K8 on enclosed inquiry slip

ROUGHNESS METER
operated by hand or power trace



Outside diameters down to 0.030 in. and inside diameters as small as 0.25 in. can be measured for roughness without adaptors or accessories by the Cleveland roughness meter. Basic instrument consists of pick-up, amplifier, and handle. It may be hand held or used with a power trace. Readings are unaffected by temperature, humidity, and/or magnetic fields. Made by **Cleveland Instrument Co.**, 735-A Carnegie Ave., Cleveland 15, Ohio.

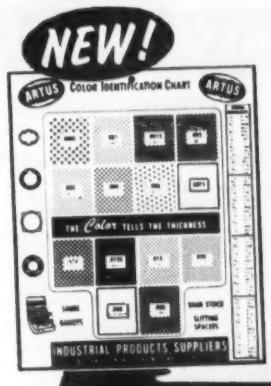
For more details circle NED-24 K8 on enclosed inquiry slip

Efficient design and sturdy construction make Duff-Norton ratchet jacks highly dependable tools for a multitude of uses. They are built to do any sort of moving, lifting or bracing job in mine and mill, or in the field, and will stand up under hard usage with very little maintenance.

Duff-Norton offers nine models of these handy jacks with capacities ranging from 5 to 20 tons. A special safety feature of all models makes it impossible to trip the jacks when under load.

For full information on Duff-Norton ratchet jacks, consult your distributor, or write for Catalog 204-N. **Duff-Norton Company, P. O. Box 1889, Pittsburgh 30, Pa.**

For more details circle NED-25 K8 on enclosed inquiry slip



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Custom shapes to your specifications.

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201 South Dean St., Englewood, New Jersey
LOwell 7-0900

For more details circle NED-26 K8 on enclosed inquiry slip

HALF the world is half asleep! Men who could be making *twice* their present salaries are coasting along, hoping for promotions but doing nothing to bring themselves forcefully to the attention of management.

They're *wasting* the most fruitful years of their business lives . . . throwing away thousands of dollars they may never be able to make up. And, oddly enough, they don't realize—even remotely—the tragic consequences of their failure to forge ahead while time is still on their side.

Engineers and other technically-trained men are particularly prone to "drift with the tide" because their starting salaries are reasonably high and promotions come at regular intervals early in their careers. It isn't until later—too much later in many cases—that they discover there is a definite ceiling on their incomes as technicians.

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If you want to discover how to succeed while you are still young—if you want to avoid the heartbreak of failure in later years—send today for *"Forging Ahead in Business"* . . . one of the most practical and realistic booklets ever written on the problems of personal advancement.

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"Forging Ahead in Business" was written for mature, ambitious men who seriously want to get down to bed-rock in their thinking about their business future. If you feel it is meant for you, simply fill in and return the coupon below. Your complimentary copy will be mailed to you promptly.

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"FORGING AHEAD IN BUSINESS"

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meet the requirements of A.S.T.M. and Federal specifications. The Gardner Glossmeter is just one of the many Gardner instruments that help you maintain a constant guard on quality control of your products.

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NEW EQUIPMENT DIGEST

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BPA NBP

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is applied by conventional dipping

Formerly available in black only, Harding Hot Dip Paint is now offered in colors. This nonburning paint assures savings because minimum of space is required for application, fire insurance rates are low, film thickness can be controlled, there is no drip paint loss, and practically all solvent is recovered. Process is available through **Harding Chemical Corp.**, 10610 Gratiot Ave., Detroit 13, Mich.

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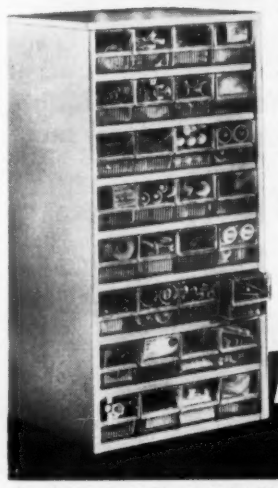
FREE CATALOG

"How to Solve SMALL PARTS STORAGE PROBLEMS"



Free 32-page illustrated catalog shows 750 different Cabinet Combinations . . . units from 4 to 128 drawers, 24 to 512 compartments, 11 different drawer sizes.

The neat, efficient way to store small parts in offices, shops, labs, etc. Ideal for handling and display.

Production line prices from $2.98

Ask for catalog AM-ED-1

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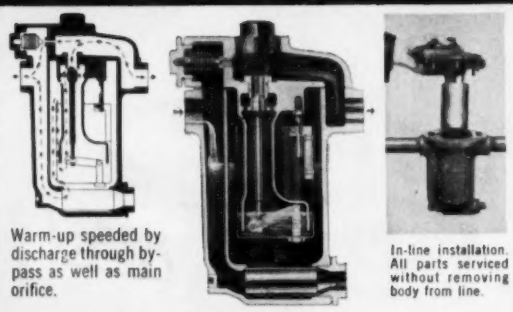
NOW—A STEAM TRAP THAT KNOWS WHAT IT'S THERE FOR!



Warm-up speeded by discharge through by-pass as well as main orifice.

In-line installation. All parts serviced without removing body from line.

AUTOMATICALLY REGULATES FOR FASTER WARM-UP AND TO KEEP OPERATING TEMPERATURE AT PEAK HEAT

Proven bucket design with built-in accessories. By-pass thermostat increases discharge for warm-up and overload conditions. Thermostat compensated to operate at 10° below saturated steam temp. Wright-Austin Airxpel principle provides for mechanical discharge of air after Thermostatic by-pass has closed.

WRITE FOR BULLETIN 808

WRIGHT-AUSTIN COMPANY
3245 WIGHT STREET • DETROIT 7, MICH.

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CHROMALOX ELECTRIC TUBULAR HEATERS

Clamp to metal surfaces, fit into machined grooves, cast into metals, immerse in liquids, install in ovens and ducts.

Versatile Chromalox Electric Tubular Heaters may be ordered in straight lengths or factory formed to nearly any shape required.

Select sheath metal and wattage to match your application and operating temperatures.

FREE—Send today for these 2 BIG HEATING HELPS

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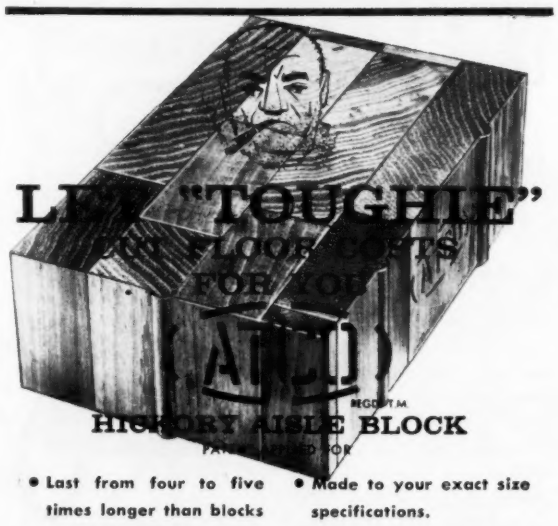

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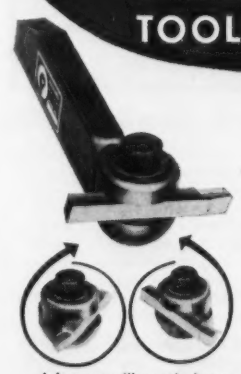

- Holds any square or round tool bit or boring bar (carbide tip or high-speed steel) 3/16 to 1/2" in any horizontal position in a complete circle.
- Does the work of six old-fashioned fixed position holders and eliminates having separate holders for each type cutter.
- Rotating clamping cap and forged shank hold tool in perfect grip, no chatter when cutting.
- Low Cost • Cuts Inventory

AA-8184

Ask your mill supply house or Maxwell representative

MAXWELL INDUSTRIES, INC.
493 East 5th Avenue • Ashtabula, Ohio

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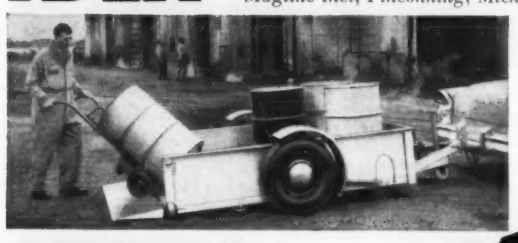
NEW DOWN TO EARTH IDEA

Trailevation! Sensational new cost-cutter for industry! Developed by Trailevator, the amazing elevating trailer that lowers to ground level...elevates load to hauling position...hauls the load.

Learn how Trailevator can save you loading time, hauling time, man-power and money! Picture Bulletin T-58 tells the story.
WRITE TODAY! *Trailevator Division, Magline Inc., Pinconning, Mich.*



TRAILEVATOR
TAKES THE LIFT OUT OF LOADING

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They cut costs because they cut operations... 75% or more!

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SHARPEN END MILLS Quickly, Completely, IN YOUR OWN SHOP

For grinding or milling of any spiral lead. Pays for itself in a hurry. Send for facts today.

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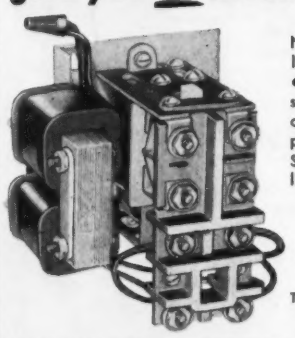
WARRICK Floatless Electrode Type
LIQUID LEVEL CONTROLS . . .
give you all these advantages!



No moving parts in the liquid • Easy to install • No adjustments necessary • Unaffected by acids or caustics • Unaffected by pressure or temperature • Standard 2&3 pole units listed by U/L

Write for 32-page Catalog which gives complete specifications

Two pole control shown at left

YOU CAN USE OUR CONTROLS FOR:

- Single & multiple pumps
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- High & low cutoffs & alarms
- Sewage & waterworks
- Chemical Industries
- Food & Dairy Industries
- OEM applications

Special controls to custom requirements

CHARLES F. WARRICK CO.
1964 W. Eleven Mile Road, Berkley, Michigan
Dep't 6 Telephone JOrdan 4-6667

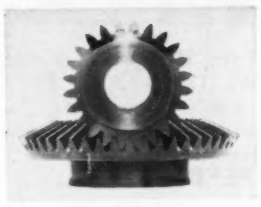
For more details circle NED-38 K8 on enclosed inquiry slip

COLLET STOP SET
for use with 1-in capacity collets

Standard 1-in. capacity collets can be used in the regular manner, or converted to solid stop collets or spring ejector collets by application of the GM5C Collet Stop Set. It can be used on lathes, second operation machines, air collet fixtures, speed collet chucks, and indexing fixtures. Collets are quickly set up for short runs, will not slip, and cannot be distorted by the stop parts. The inserts for the collet stop body can be machined to suit varying requirements. Inserts are adjustable in or out in the stop body to achieve the desired chucking depth. Set includes parts for assembling small or large solid stops and small spring and large spring ejector stops. Price of set is $9.75. Made by **General Gauge Guild,** Dept. 5A, 7570 San Fernando Rd., Sun Valley, Calif.

For more details circle NED-39 K8 on enclosed inquiry slip

BEVEL GEARS
operate in either direction, available in various ratios



Minimum of two teeth are in action at all times on FMS Spheroid bevel gears, offered in two types. Type A for most industrial applications is alloy steel and finish-machined after heat treatment. Type AA for high load carrying ability is aircraft quality alloy steel and carburized and heat treated on the tooth surfaces to Rockwell 60C. After heat treatment, tooth flanks are ground. Both types operate equally well in either direction of rotation. Backlash can be closely controlled and thrust loads are minimized.

Gears need not be matched or the teeth timed. All gears of the same part number are interchangeable. Ratios available are 1 to 1, 2 to 1, 3 to 1, 3 to 2, and 4 to 3. Pitch diameters range from 1 to 13.5 in., with maximum load capacity for a 12-in. pitch and 1 to 1 ratio being 32 hp per 100 rpm for Type A and 48 hp per 100 rpm for Type AA. Special sets with up to 24-in. diameter can be ordered. Made by **American Transmission Corp.,** 224 Passaic Ave., Caldwell, N. J.

For more details circle NED-40 K8 on enclosed inquiry slip

Stock Speed Reducers

Alten Foundry & Machine Works, Inc.—Tabulated in 4-page bulletin are complete specifications and performance data on double-reduction speed reducers with ratings from 2.1 to 275.9 hp, depending on speed, ratio, and size.

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LIGHTS UP AREAS NO OTHER FLASHLIGHT CAN REACH

Throws light around corners.
Now, easy to check hard-to-reach spots.

NEW....

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DUO-FLEX FLASHLIGHT

2 lights in 1. Switch on powerful 1,000 ft. fixed focus beam or raise extension arm—presto—automatically regular flashlight goes off and flexible pin point beam goes on. The only flashlight with dual lighting. NO. 75LP

SOLVES TOUGH INSPECTION PROBLEM.

NO. DF22

NEW, THE BATTERY THAT PROTECTS YOUR FLASHLIGHT 1. GUARANTEED LEAK PROOF 2. PROVIDES LONGER LIFE, BRIGHTER LIGHT.

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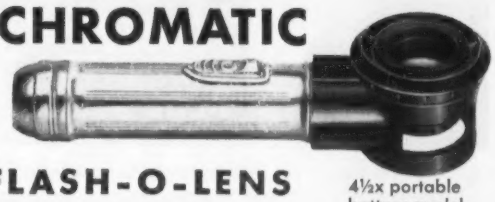
UNITED STATES ELECTRIC MFG. CORP.
222 W. 14TH ST., DEPT. D
NEW YORK 11, NEW YORK

For more details circle NED-42 K8 on enclosed inquiry slip

it's SHARP . . . it's CLEAR when you inspect with . . .

PIKE 4½ power ACHROMATIC



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4½x portable battery model; also electric "plug-in" models

- sharp focus
- adjustable image
- built-in illumination
- quick conversion to 7, 20 or 40 power with interchangeable lenses

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You're always sure of accurate temperature readings with this easy-to-read Foxboro "Lifetime" Dial Thermometer. Welded "one-piece" bulb and connecting capillary tubing of 316 Stainless Steel prevent corrosion from liquids, fumes or vapors. Needs no protective tubing. Tightly sealed aluminum alloy case. Available in standard ranges to 1000°F. Full-size 12" scale. Write for Bulletin 14-11. **The Foxboro Company, 6610 Neponset Ave., Foxboro, Mass., U.S.A.**

FOXBORO Reg. U. S. Pat. Off. DIAL THERMOMETERS

For more details circle NED-44 K8 on enclosed inquiry slip

Aftercooler and Cyclone Separator designed for cleaner, dryer compressed air

The Adams Aftercooler and Cyclone Separator are designed to efficiently condense and remove water from compressed air and process gas. Condensed moisture and entrained dirt and oil are subsequently removed in a cyclone type separator. This unit is scientifically designed for maximum removal efficiency over a wide range of flow rates.

For normal use, units are available to cool gases to within 10° F of the temperature of the cooling water. Specially designed units are available to permit a 2° F approach to cooling water temperature, for application where low moisture content is critical.

Adams Aftercoolers and Separators are available from stock to handle 20 - 40,000 cfm with 10° cooling and 25 - 19,200 cfm where it is necessary to cool within 2°F of the cooling water. Special units can be supplied to suit an unlimited range of requirements. In all cases the maximum pressure loss at rated capacities is ½ psi.

This wide range of sizes enables the economical utilization of Adams Aftercoolers and Separators in virtually all industrial application. For further information on how R. P. Adams' units will solve your compressed air problems and save you money, write today for Bulletin 711. R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *Advt.*

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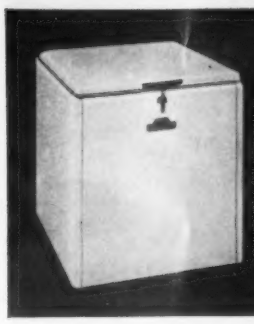


New! Low Temperature Freezer

MINUS 120° F TO PLUS 300° F

- Serves many needs:—Laboratory Control, Industrial Research and Production.
- For Cold Treating, Stabilizing, Environmental Testing, Low temperature storage of metals, Rivet cooling, Shrink fitting, Gage seasoning, Steel hardening and Metallurgy.

invaluable in the field of GUIDED MISSILES and ROCKETRY

Standard production model, (white) self-contained, including automatic controls.

34" high—28" deep—38" wide—outside dimensions.

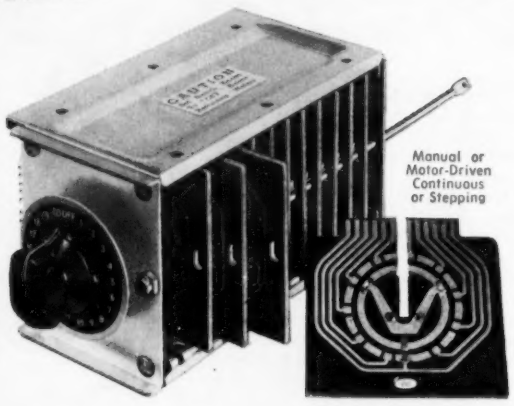
Complies with National B-9 Refrigeration Code.

New low price—immediate delivery (available without automatic controls, for Dry Ice Storage).

Alpha Electric Refrigeration Co.
1115 East Seven Mile Road • Detroit 3, Michigan

For more details circle NED-46 K8 on enclosed inquiry slip

NEW REVOLUTIONARY IDEA OBSOLETES OLD SWITCHES



For Telemetering . . . Missiles

Computers . . . Communications

ROTARY WAFER PRINTED ETCHED

Tabet SWITCH

- Saves time and money on operating and repairs.
- Has definitely longer life.
- Now being supplied, under U. S. Government specifications, for use by the Navy in communications equipment both aboard ship and in shore installations.

TABET rotary, wafer switches have been proved by extensive tests on all types of time sequence switching for both manual and motor driven operation. Easily adaptable for stepping switch service.

Individual TABET switch wafers (including rotary sections) are instantly removable without unsoldering or disassembling.

TABET printed circuit wafers permit unlimited choice of switch circuit configurations.

TABET wafers plug into rugged, semi-floating, printed circuit receptacles—which can be designed to match any wafer-circuit terminating patterns.

TABET wafer contact surfaces are heavily silverplated for maximum life and low-resistance contact. Rhodium plating is used for motor driven, high speed switching.

An outstanding feature of the TABET rotary, wafer switch is the ease with which repairs and alterations can be made.

It never is necessary to remove wires from the TABET Switch.

Both the TABET wafers and their receptacles are easily removed.

It is impossible to make errors in replacements on the TABET Switch.

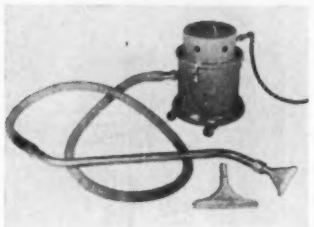
TABET rotary, wafer Switches are manufactured under U. S. Pat. Nos. 2,832,901 and 2,841,660. Other U. S. and Foreign patents pending.

For full information on the adaptability of TABET Switches to the needs of your business, address:

Tabet MANUFACTURING CO., INC.
1336 BALLANTINE BLVD. NORFOLK 12, VA.

For more details circle NED-47 K8 on enclosed inquiry slip

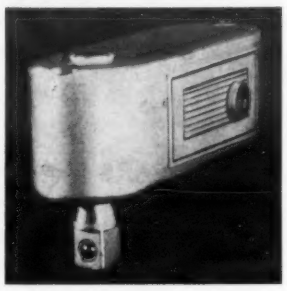
INDUSTRIAL VACUUM CLEANER powered by compressed air



Compact, lightweight Jet Syphon industrial vacuum cleaner operates on compressed air and is thus completely safe in wet, dusty, or explosive atmospheres. It develops from 2 in. of vacuum on 60 psi to 4 in. on 90 psi. Cleaner has no moving parts and requires practically no maintenance. It maneuvers easily on caster wheels. Made by **Laukhuff-Pratt Mfg. Co.**, 3097 W. Mill Rd., Milwaukee, Wis.

For more details circle NED-48 K8 on enclosed inquiry slip

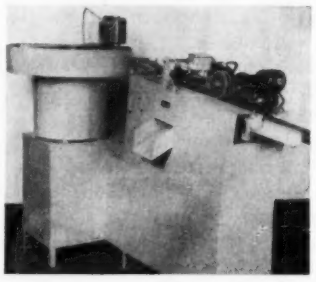
MAGNETIC TORQUE WRENCH has 2 to 40 lb-in. torque range



An Alnico V permanent magnet provides the restraining force in this magnetic torque wrench. Preset torque is recognized by a click and "feel," and accuracy is within ±2 per cent. Designed for assembly and testing of instruments and apparatus, wrench is offered in two models with respective torque ranges of 2-10 and 10-40 lb-in. Made by **Stuart D. Paterson Co.**, Dept. 11, 65 Culver Parkway, Rochester 9, N. Y.

For more details circle NED-49 K8 on enclosed inquiry slip

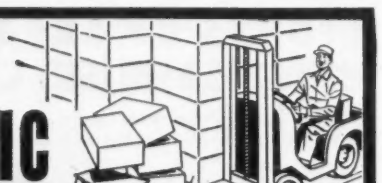
CYLINDRICAL PARTS FEEDER for various machining operations



Cylindrical parts with diameters from 3/8 to 3 in. can be handled by this feeder, designed to feed parts to a centerless grinding machine. It can also be used to feed similar parts into other types of machines for printing, stamping, machining, and forming. Feeder will handle a variety of sizes and shapes of parts, regardless of their length-to-diameter ratio, and orient them so that they are fed as a continuous tube. Changeover from one size to another requires 15 to 20 min. The final discharge chute is self-adjusting, with the mechanism providing a smooth, vibration-free feed. Linear rate of feed exceeds 100 ipm. Machine applies a constant back pressure to the parts, and an electronic control prevents over-feed. Made by **U. S. Engineering Co.**, Dept. NED, 40-24 22nd St., Long Island City 1, N. Y.

For more details circle NED-50 K8 on enclosed inquiry slip

STOP TRAFFIC DAMAGE —AT EVERY LOAD CORNER!



RAN guard ALL-STEEL CORNER GUARDS

SAVE YOU THOUSANDS OF DOLLARS IN DAMAGES EVERY YEAR!

Thousands in use in America's largest warehouses and plants! Vivid black and yellow stripes on heavy-gauge steel warn approaching trucks of danger zone. Heavy-duty construction absorbs impact — saves damage to materials! For use on floor, beneath pallet, or on wall corner. ORDER NOW!

NEW LOW PRICES!

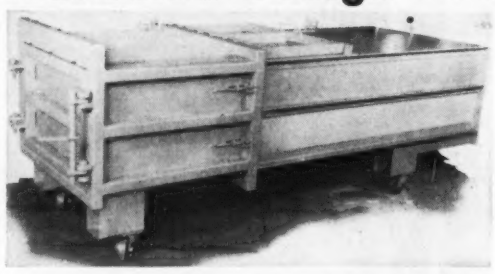
MODEL No. 812—12 x 12 x 24 with gusset; 6 to 48, each.....$3.00
MODEL No. 813—12 x 12 x 24 no gusset; 6 to 48, ea.....$2.90
MODEL No. 815—15 x 15 x 30 with gusset; 4 to 48, ea.....$4.50
MODEL No. 816—15 x 15 x 30 no gusset; 4 to 48, ea. $4.40

Prices F.O.B. Franklin Pk., Ill. Write for larger quantity prices.

RANdolph INDUSTRIAL EQUIP. CO. 9559 W. Grand Ave. Franklin Park, Illinois

For more details circle NED-51 K8 on enclosed inquiry slip

Advanced Design . . .



in waste materials disposal systems

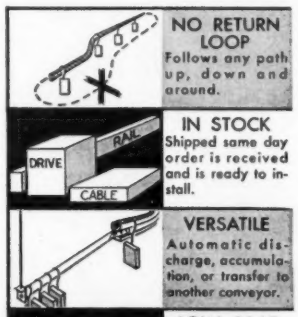
The LAKE BALER 1 MARK

The ONLY portable, power-operated baler on the market—Hydraulic, completely self-contained, nothing to lubricate—EFFORTLESS operation, one control lever—Load from any direction—Fast, 16-second cycle—Smooth—Noiseless—Safe—Semi-automatic bale tying—Automatic bale ejection—No installation expense.

Mfd. by LAKE ENGINEERING CO.
312 GOSTLIN STREET P.O. BOX 784
HAMMOND, INDIANA

For more details circle NED-52 K8 on enclosed inquiry slip

MONOFLO rotating cable conveyor



NO RETURN LOOP — Follows any path up, down and around.

IN STOCK — Shipped same day order is received and is ready to install.

VERSATILE — Automatic discharge, accumulation, or transfer to another conveyor.

INVOICE 1/2 — LOW COST — Far under price of any other power conveyor.

INSTALLED ½ DAY — By any mechanic with simple tools.

Full size section thru MONOFLO CONVEYOR

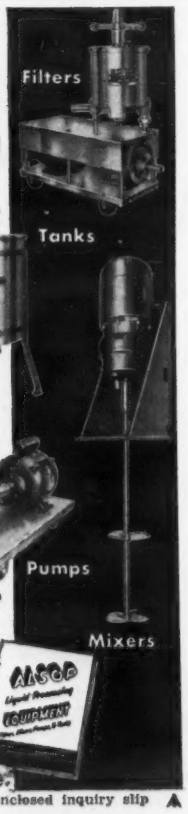
Hundreds of MONOFLOS working in Electronics, Metal Parts, Autos, Atomics, Missiles, Printed Circuits, Garments, Laundries, Glass, Food, Rubber, Plastics, Instruments.

They deliver parts, return empty jigs, accumulate parts and carry parts thru heating, cooling, painting, baking, etching, drying.

M-H STANDARD CORPORATION
515 Communipaw Ave., Jersey City 4, N. J.

For more details circle NED-53 K8 on enclosed inquiry slip

LIQUID PROCESSING



DEPEND ON ADVICE FROM ALSOP

Engineering and Laboratory assistance, at no charge, to solve your equipment problems in...

. . . LIQUID FILTRATION
. . . LIQUID MIXING
. . . LIQUID STORAGE
. . . LIQUID PUMPING

Remember, a complete report on your liquid processing problems is FREE!

DEPEND ON EQUIPMENT FROM ALSOP

ALSOP Engineering Corporation
1310 East Road
Milldale, Connecticut

Send for analysis forms and literature.

For more details circle NED-64 K8 on enclosed inquiry slip

SAFE PORTABLE HEAT
FOR YOUR PLANT

canvas ducts spot heat where you want it

DE LUXE MODEL
HERMAN NELSON
PORTABLE AIR HEATERS

SAVE MONEY . . . SAVE MAN HOURS

- Cure and dry concrete, plaster, other materials
- Heat loading docks, storage sheds, production areas
- Pre-heat engines, thaw frozen equipment
- Protect plant equipment during heat shut-downs
- Temporary heat for warehouses

Write for free literature
AMERICAN AIR FILTER COMPANY, INC.
PORTABLE PRODUCTS DEPT. 14 • LOUISVILLE 8, KY.

▲ For more details circle NED-55 K8 on enclosed inquiry slip ▲

1.7 3.0 microns
THERMARED

IMMERSION HEATERS

Featuring
VAPO-VENT
VAPOR and LIQUID TIGHT VENTING ASSEMBLY ON ALL METAL HEATERS

and
NEO-TITE
VAPOR and LIQUID TIGHT ASSEMBLY ON ALL QUARTZ HEATERS

Presenting The NEW REPLACEABLE HEATING ELEMENT

THERMARED, an improved line of immersion heaters, presented by N.J. THERMEX, introduces a new innovation of vapor venting to eliminate internal explosion in Quartz heaters. The VAPO-VENT assembly provides a venting system for expanding gases, a completely liquid sealed head assembly and an extremely versatile unit which permits field repair with standard replacement. These exclusive THERMARED features are further aided by the NEO-TITE vapor and liquid tight assembly which protects the heating elements in both Quartz and Steel units. Here at last, is a thoroughly versatile unit permitting even accidental total immersion in highly corrosive chemicals with no harm to the equipment.

These and many more features are fully detailed in our latest catalog available on request. Models in standard, thermostatic and remote control thermostatic units are available in Steel, Stainless Steel and Quartz construction.

*ON QUARTZ HEATERS

N. J. THERMEX COMPANY, INC.
535 - 533
BERGEN ST., HARRISON, N. J.

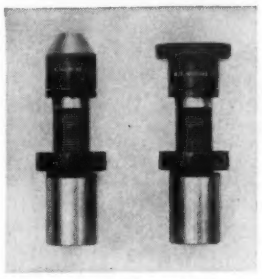
▲ For more details circle NED-56 K8 on enclosed inquiry slip ▲

EMERGENCY OXYGEN UNIT
completely equipped and portable

Weighing only 2½ lb, the Oxy-Quik portable emergency oxygen unit includes two oxygen tanks, pressure reducing regulator, mask, and hose in a plastic carrying case. It is designed for use in first aid stations or hanging on walls, stretchers, or equipment in areas of possible use. The oxygen tank is replaced in 30 sec without tools. Unit is simple to use, enabling untrained personnel to administer emergency oxygen until routine therapy is applied. Price is $49.50. Made by **Oxygen Equipment & Service Co.**, Dept. OG, 8335 S. Halsted St., Chicago 20, Ill.

▲ For more details circle NED-57 K8 on enclosed inquiry slip ▲

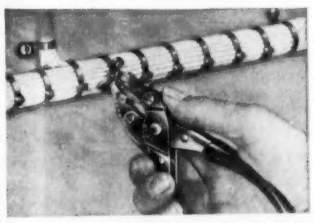
ADJUSTABLE BAR STOP
for use on all screw machines



Bar stock and tubing can be fed into screw machines of all types to a specified length against the O K adjustable revolving turret bar stop. Made in three sizes with ⅝, ¾, or 1-in. shanks, it is available with a cone type head for most bar jobs and a flange type head for use in machining tubing or stock to the machine's maximum collet capacity. Length adjustments are made on the machine. Revolving head prevents marring the part end. Made by **O K Machine Co.**, Dept. NE, 3066 N. Lima St., Burbank, Calif.

▲ For more details circle NED-58 K8 on enclosed inquiry slip ▲

NYLON TIE
speeds binding of wire bundles



Installation of the Ty-Rap nylon tie for binding wire bundles and harnesses takes about 5 sec. It is slipped under the wire bundle and its knurled tip is brought around and pulled through a hub at the opposite end. Simple installing tool automatically cuts the tie to proper length and locks it in place. Also available is a self-clinching Ty-Rap which has metal clinching teeth in its hub. When tip is pulled tightly through the hub, teeth prevent it from withdrawing or loosening. Tie supports up to 30,000 times its own weight and accommodates from 1/16 to 1¾-in. diameter bundles. Milky white, red, blue, yellow, brown, green, and black colors are available. Made by **Thomas & Betts Co.**, 24 Butler St., Elizabeth 1, N. J.

▲ For more details circle NED-59 K8 on enclosed inquiry slip ▲

EXPLOSION PROOF SOLENOIDS AND SOLENOID OPERATORS

FX-326 SOLENOID
FX-300 LINE
EXPLOSION PROOF SOLENOIDS

R2DX-326
RDX-300 LINE

The FX-300 explosion proof solenoids and the RDX-300 explosion proof solenoid operators have a variable stroke. For the standard models at minimum stroke, the capacity at 85% voltage ranges from 8 lbs. at 0.47" stroke to 300 lbs. at 1.67" stroke. At maximum stroke, the capacity ranges from 3 lbs. at 1.25" stroke to 100 lbs. at 5" stroke.

By the use of external levers longer than the standard ones, the maximum stroke can be increased with corresponding decrease in pull.

For external levers twice as long as the standard ones, the capacity at maximum stroke ranges from 1.5 lbs. at 2.5" to 50 lbs. at 10". Other combinations are possible.

Ask for Bulletins EE-191 and EE-193 or our complete catalog. See our catalog in Sweet's Catalog Service. There is a Trombetta solenoid for every imaginable requirement.

TROMBETTA SOLENOID CORP.
329 N. MILWAUKEE ST. • MILWAUKEE, WIS.

▲ For more details circle NED-60 K8 on enclosed inquiry slip ▲

Which do you have?

"Shortstub" ELECTRODE HOLDERS

Convert the total fluxed portion of every electrode into weld metal — REDUCE STUB WASTE TO A MINIMUM

SPECIFICATION

TWO SIZES FILL ALL NEEDS	Model No.	Cap. Amps.	List Price
See your local welding Distributor or write for further information	4	400	7.70
	6	600	8.80

Quantity prices save you 10 to 20%

Mfd. & Ptd. By
BERNARD WELDING & EQUIPMENT CO.
Pioneer for Modern Welding
10232 AVENUE N, CHICAGO 17, ILL.

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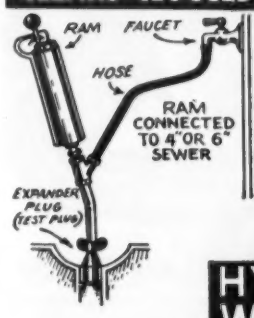
CLEARS CLOGGED DRAINS in Seconds!



The ideal plumbing service tool. Can pay for itself in one application!

Smashes through the most stubborn blockages, then flushes clean — all in one operation!

Comes equipped with self-contained manual compressor (can charge Ram to 100 lbs. in 30 seconds!) and drain adaptors in 6 sizes!

HYDRAULIC WATER RAM

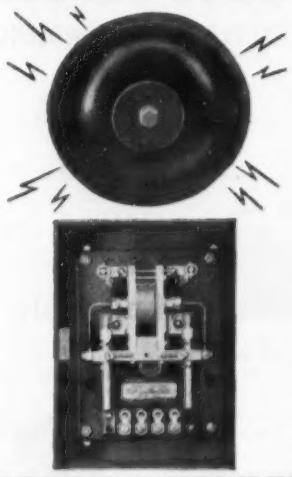
Anyone can operate it! Thousands already in use, have saved *millions* of dollars in industry and institutions. Why lose time, suffer inconvenience, waste dollars needlessly on either completely blocked or slow-moving sewers, drains, fixtures? The HYDRAULIC WATER RAM clears severest stoppages with SPLIT-SECOND HYDROSTATIC IMPACT! . . . Shatters blockage, then flushes clean. No snakes, chemicals, cables. No pushing through. Works perfectly, *vent or no vent!* Nothing to wear out. You risk nothing on our 30 day free trial offer, at our expense. Write for details.

Works perfectly with all clogged fixtures, toilets, sinks, urinals, etc. Equipped with 4" rubber cone, ideal for toilets, plus set of 5 tapered adapter plugs for other drains or sewers.

Write for Information, Prices, Free Trial Offer — Today!
HYDRAULIC MANUFACTURING CO.
214 INDUSTRIAL HEIGHTS KIEL, WISCONSIN

▲ For more details circle NED-62 K8 on enclosed inquiry slip ▲

FAST ALARM WHEN FIRE STRIKES!



Protect valuable buildings, save priceless lives, with a Kidde Atmo Fire Detecting and Alarm System. Using sensitive rate-of-temperature-rise tubing as a detecting element, the Kidde Atmo system works at the first hot breath of fire, can sound an alarm at fire area, outside the building, at local fire department station. Will also give fire location at panel near any manned telephone switchboard. For more information send for Kidde's Atmo Booklet.

WALTER KIDDE & COMPANY, INC.
1024 MAIN STREET, BELLEVILLE 9, N. J.

Send me your I-18 Booklet on Kidde Atmo Fire Detecting and Alarm Systems.

NAME _____
ADDRESS _____
CITY _____ STATE _____

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DEFEAT DUST

Nose, Throat and Lung Protection

DUPOR No. 24 RESPIRATOR

Approved by U.S. Bureau of Mines

Provides proven protection from pneumoconiosis-producing dusts. Filters the air and makes it clean. 24 sq. inches of filtration area. Soft rubber face mask. One of many DUPOR models of proven superiority. Write for literature. See your safety equipment supplier or order your sample direct — $3.00 postpaid.

H. S. COVER
Dept.1005 South Bend 14, Ind.
"Respirators for Industry Since 1894"

▲ For more details circle NED-67 K8 on enclosed inquiry slip ▲

NOW!

Branded for lifetime identification

HOW IT'S DONE: The mark is embossed onto, not stamped into, the chain.

CHAIN BUYERS & USERS—Now you can be sure of the make of chain you are getting and of the grade (strength) of the chain you are using...a definite safety advantage. Presently available on Inswell Proof Coil, BBB, High Test and Herc-Alloy chain in all sizes under ½".

SPECIFY "CM" CHAIN

CM HOISTS AND CHAIN

COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
Regional Offices: NEW YORK CHICAGO • CLEVELAND SAN FRANCISCO • LOS ANGELES
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

▲ For more details circle NED-68 K8 on enclosed inquiry slip ▲

STACKABILITY!

SAVES EXPENSIVE FLOOR SPACE
CUTS EXCESSIVE PARTS HANDLING

low cost Stackbins are interchangeable in storage, processing and assembly

Flexible, easy-to-handle units are quickly and securely stacked in stockroom or at point of usage. No tools or bolts are required. Hopper front keeps parts always visible, instantly accessible.

Heavy, all welded steel construction in seven graduated sizes. Also available in combination with individual, interstacking racks.

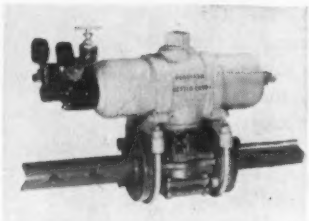
All Stackbin products are sold direct
Save Handling Time, Save Space

WRITE FOR FREE CATALOG
STACKBIN CORPORATION, 1081 Main St., Pawtucket, R. I.
Mfd. & Sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM *"Stacked and Still Accessible"*

▲ For more details circle NED-69 K8 on enclosed inquiry slip ▲

VALVE POSITIONER-ACTUATOR in torque capacities to 4500 lb-in.



Compressed air is used in Robotarm positioning valve actuators for throttling or positioning plug, ball, and butterfly valves or to operate other 90-degree rotation devices. Up to 4500 lb-in. torque is developed with 100-psi air. This cylinder type device has the drive mechanism sealed in an oil bath. The rotating drive shaft is easily adapted to the average valve stem, and provision is made for manual operation. Mounting brackets facilitate field installation. Made by **Bettis Corp.**, Dept. NE, 320 S. 66th St., Houston 11, Tex.

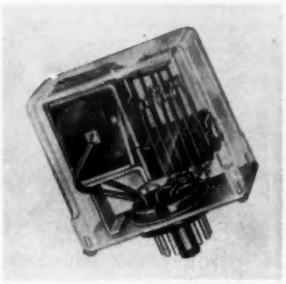
▲ For more details circle NED-70 K8 on enclosed inquiry slip ▲

BALL BEARINGS low cost flanged and radial types

Press-formed, case-hardened inner and outer races and a full complement of heat treated and ground high carbon steel balls are features of this line of low cost commercial type flanged and radial ball bearings. They are available for shaft diameters from 29/32 to 2 in. Available prelubricated or plain, the easily installed bearings are for light duty, intermittent operation. Made by **Freeway Washer & Stamping Co.**, Bearing Div., Box 1756N, Cleveland 5, Ohio.

▲ For more details circle NED-71 K8 on enclosed inquiry slip ▲

PLUG-IN RELAYS equipped with 10-amp contacts



Small size and low operating power are features of Frame 219 relays, mechanically protected in plastic covers. Built to perform 20 million operations, the plug-in units have contacts with 10-amp current carrying capacity. Insulation withstands a minimum of 1500 v ac dielectric test. Stock contacts are double-pole double-throw on octal plugs and double-pole double-throw plus two normally-open contacts on 12-pin plugs. Operating coils may be alternating or direct current. Typical DPDT type is $2\frac{5}{8}$ x 1 7/16 x 2 7/16 in., excluding the plug. Made by **Struthers-Dunn, Inc.**, Dept. ND, Lambs Road, Pitman, N. J.

▲ For more details circle NED-72 K8 on enclosed inquiry slip ▲

FASTER FINISHING...LOWER COSTS

with **Buschman**
BUSH-LOCK
Cable Conveyor Components

Bush-Lock Cable Conveyor systems, "custom-built" on the spot from the low-cost package of standard stock components, can be integrated with belt and roller gravity systems to meet every finishing need.

An overhead cable-and-belt conveyor combination synchronized for speed rate is used by this manufacturer of television cabinets to get more smooth efficiency per foot of floor space in hand rubbing operations.

Submit your production problem. Buschman specialists will solve it.

Every Way Better — *Write for literature today.*

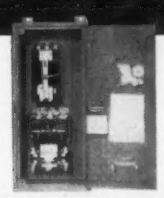
EWB **THE E. W. BUSCHMAN CO.**
4482 Clifton Avenue Cincinnati 32, Ohio

CONVEYORS FOR EVERY INDUSTRY

▲ For more details circle NED-73 K8 on enclosed inquiry slip ▲

slash installation costs with **FEDERAL PACIFIC**

Combination Motor Starters



THERMAL MAGNETIC CIRCUIT BREAKER permits harmless temporary overloads; trips instantly when overload becomes dangerous...offers quick-make, quick-break action, thermal tripping element and deionization arc quenchers.

DISCONNECT SWITCH designed for cool operation, safety and long life. Features clear visibility, positive circuit opening and silver plated current carrying parts.

NOW Federal Pacific does away with the need for separate motor controls and safety switches or circuit breakers! Now you can meet all your needs with one simple space-saving device...and save money while you do it! You install only one device—save valuable time—conserve precious space! Faster, easier installation more than offsets the slightly additional cost. Write for bulletins 514 & 515: Federal Pacific Electric Co., Newark, N. J.

FEDERAL FPE PACIFIC
The Best in Electrical Distribution and Control Equipment

▲ For more details circle NED-74 K8 on enclosed inquiry slip ▲

HOW TO ENGINEER SPECIFY ORDER PRICE...

AIR POWER CYLINDERS

Here is complete engineering data on Hannifin's newest line of air power cylinders. Every mounting style is fully dimensioned in all sizes. Standard models or special modifications are made easy to specify. The price sheet, too, is easy to understand, easy to use.

Write for Bulletin 213-B.

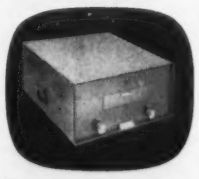
HANNIFIN
Hannifin Company, 527 South Wolf Road, Des Plaines, Ill.
(Hannifin Company is a division of Parker-Hannifin Corporation)

▲ For more details circle NED-75 K8 on enclosed inquiry slip ▲

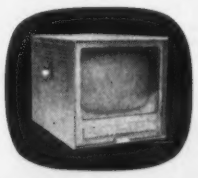
New from **IT&T...**

Quality Closed Circuit Television Systems for Visual Communication in Industry, Business and Education.

Vidicon Cameras
Compact, rugged • 600 line resolution • Clear pictures at 10 ft. candles or less • Electronically controlled automatic light compensation



Control Units
Camera and control may be located up to 500 feet apart • Electronically regulated power supply



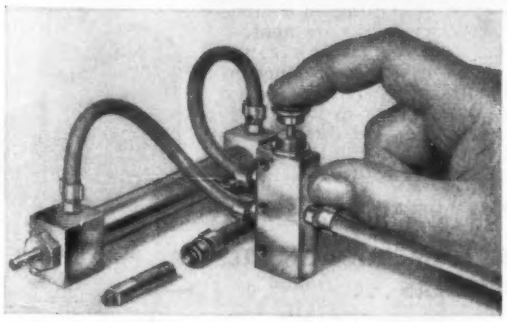
Monitors
Aluminized picture tube • Complete range of screen sizes • Polaroid filter glass • Choice of cabinet or rack mount

Write today for data sheets, specifications and other information!

INTERNATIONAL TELEPHONE & TELEGRAPH CORPORATION IT&T
Industrial Products Division
15191 Bledsoe Street, San Fernando, Calif. • EMpire 7-6161

▲ For more details circle NED-76 K8 on enclosed inquiry slip ▲

NEW! MORE Powerful 9/16" MINIATURE AIR CYLINDERS · 4-WAY AIR VALVES · QUICK CONNECTS



NEW more powerful 9/16" bore spring return and double acting MINIATURE Air Cylinders to complement our widely used 3/8" bore cylinders, NEW 4-way Air Valve, Quick Connects, A.C. and D.C. Solenoids, fittings, mountings and other needed items to improve your automatic tooling and production devices or new end products. Made for MILLIONS of cycles of trouble-free operation! Modestly priced.

Write NOW for NEW Bulletin MA →

Clippard INSTRUMENT LABORATORY, INC.

7372-N Colerain Rd., Cincinnati 39, O. • Phone: JA 1-4261

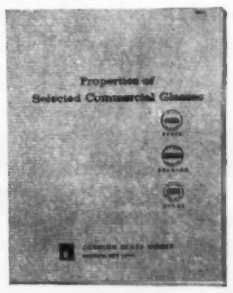
Manufacturers of R. F. Coils, Electronic Equipment, Miniature Pneumatic Devices

▲ For more details circle NED-77 K8 on enclosed inquiry slip ▲

How to find out where glass can help you

Glass can take many forms that can help you. There are 65,000 different combinations of useful properties that can be formulated to your own specifications here at Corning.

Glass can be transparent or opaque, a conductor or a nonconductor of electricity, it is immune to corrosion, can be made immune to heat and cold, can stand as a barrier to atomic radiation. It can be many things to many people.



This 12-page Bulletin, "Properties of Selected Commercial Glasses," describes in detail a few of the Corning high-production glasses. It discusses their mechanical properties, resistance to thermal stresses, heat transmission characteristics, electrical properties, corrosion resistance, the basic information you need to determine your need for glass in your products or processes.

Send for Bulletin B-83. Write Technical Products Division.

CORNING GLASS WORKS

56-10 Crystal Street, Corning, N.Y.

Corning means research in Glass

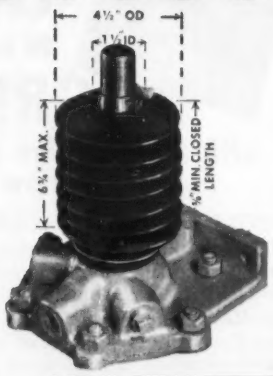
▲ For more details circle NED-78 K8 on enclosed inquiry slip ▲

PROTECTED

GORTITE (neoprene)

SLEEVES

BOOTS



Ask for new bulletin AH-3

A&A Mfg. Company Inc.
712 S. 12th St.
Milwaukee 4, Wis.

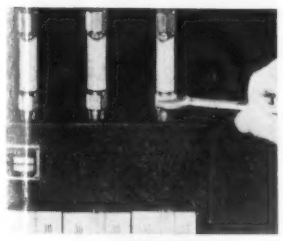
GASKETS

Good prices on all types of gaskets—cut from our surplus neoprene-base materials and with our standard dies.

ALL SHAPES AND CONTOURS

▲ For more details circle NED-79 K8 on enclosed inquiry slip ▲

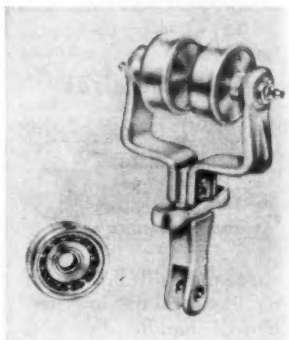
MANOMETER CHECK VALVE handles pressures to 500 psi



Loss of indicating fluid in manometers is prevented under overrange conditions by this check valve which is suited for pressures to 500 psi. Instrument accuracy and response are unaffected, and "air blocking" is prevented. Valve has ¼-in. threads, female and male respectively, at top and bottom. Made by **Meriam Instrument Co.**, 10838 Madison Ave., Cleveland 2, Ohio.

▲ For more details circle NED-80 K8 on enclosed inquiry slip ▲

OVERHEAD TROLLEY has ball bearing, grease fitting



Rolling friction of the No. 3 overhead trolley is minimized by a machined outer wheel race and a hardened steel ball bearing. It has replaceable grease fittings and a ball check device. Neoprene or felt seals protect against contamination. Drop forged or pressed steel load-carrying H-attachment is offered with bolted or riveted construction, and side brackets are drop forged. Capacities range from 125 to 150 lb per trolley, depending upon the application. Made by **Rapistan-Keystone Co.**, 21570 W. Eight Mile Rd., Detroit 41, Mich.

▲ For more details circle NED-81 K8 on enclosed inquiry slip ▲

MAGNETIC DISC BRAKES self-adjusting, rated to 575 lb-ft

Designed for C-flange motor mounting on NEMA frames 324UC through 505C, or for foot mounting, 90M Series magnetic disc brakes have torque ratings of 125 to 575 lb-ft. Features include self-adjustment, through-shaft construction, standard and protected enclosures, automatic reset manual release, standard NEMA shaft extension for hub mounting, high thermal capacity, heavy-duty discs, Taper-Lock hub, continuous duty, and alternating or direct current coil energization. They are adaptable for drives involving high inertia loads or high frequency starts and stops. Made by **Dings Brakes Inc.**, 4758 W. Electric Ave., Milwaukee 46, Wis.

▲ For more details circle NED-82 K8 on enclosed inquiry slip ▲

BATEMAN BANTAM IRON WORKER

THE ONLY IRON WORKER OF ITS KIND ON THE MARKET TODAY

No grinding Necessary After Cut. One Stroke Cycle Clutch Operator by Hand or Foot

The Bateman "Bantam" cuts 2" x 2" x ¼" angles and ¼" x 4" flats. Standard punches will fit this machine. The Coper will cope 1¼" through ⅛" material. It will punch ½" hole through ¼" material. With the clutch open, the Bantam will make 44 strokes per minute. It is made of high-grade cast iron, with the clutch, pin and dog made of hardened steel. The blades are made with tool steel. It is powered with a fly wheel and gear drive, and uses a small ¾ hp motor, 1750 rpm.

Bateman Bantam with punch ... $575.00
Shear only ... $495.00
Shipping wt. 750 lbs.

BATEMAN FOUNDRY & MACHINE
MINERAL WELLS, TEXAS

▲ For more details circle NED-83 K8 on enclosed inquiry slip ▲

BRADY

QUIK-PLATES ...via Graybar

Here's your fastest permanent method of trademarking, naming or affixing directions on any product . . .

Now you can apply positive identification name plates to any product without screws, rivets or escutcheon pins. Brady self-bonding anodized Quik-Plates flush mount on metals, plastics, glass or wood. Available in standard or special designs; in one, two or three colors.

Write GRAYBAR for free samples

Your nearest Graybar office will be glad to give you complete information and prices on Quik-Plates and the famous Brady Wire Markers. Available through Graybar offices and warehouses in over 130 cities from coast to coast. Phone or write today.

GRAYBAR ELECTRIC COMPANY, INC. 81
420 Lexington Ave., New York 17, N. Y.

Call Graybar first for . . .
IN OVER 130 PRINCIPAL CITIES

Everything Electrical GraybaR ELECTRIC COMPANY

▲ For more details circle NED-84 K8 on enclosed inquiry slip ▲

Make overhead space contribute to plant earnings

CAPACITIES ½ TO 5 TON

• SINGLE AND TWO SPEED MODELS

METEORS offer real materials handling help in many ways. Read all about their unusual operating advantages in the METEOR CATALOG *sent on request*. Illustrates all details of suspension and construction. Prices included.

CHISHOLM-MOORE HOIST DIVISION
COLUMBUS McKINNON CHAIN CORPORATION
TONAWANDA, NEW YORK
DISTRICT OFFICES: NEW YORK, CHICAGO, CLEVELAND
In Canada: McKinnon Columbus Chain Limited, St. Catharines, Ontario

▲ For more details circle NED-85 K8 on enclosed inquiry slip ▲

CONVERT EMPTY DRUMS INTO CLEAN, SAFE WASTE CONTAINERS . . . QUICKLY, INEXPENSIVELY

New heavy-duty lids make any drum a practical and efficient waste receptacle. G-S Swing Top Lids attach instantly to cover, conceal and confine unsightly, hazardous rubbish. There are models to fit 15, 30 and 55 gallon drums . . . all have two free-swinging doors, baked enamel rustproof finish and no sharp edges.

MODEL 1711 (shown above) Fits 55 gal. drums. Price $14.25
MODEL 2011 Fits 30 gal. drums to 20" dia. Price $11.25
MODEL 1511 Fits 15 gal. drums with beaded bottom for sure fit. Price $7.75

Model 2011 Model 1511

QUANTITY PRICES ON REQUEST

GENERAL SCIENTIFIC EQUIPMENT CO.

G.A. 1799 7518 Limekiln Street, Phila. 50, Pa. HAncock 4-1550

▲ For more details circle NED-86 K8 on enclosed inquiry slip ▲

UNSTICK *stuck* BINS

Here's the newest and most efficient answer to those hard-to-move materials in sticky bins . . . designed to provide superior operating efficiency . . . exclusive pinpointed vibration gets right to the trouble spot – starts stubborn materials moving!

PAT. PEND.

ERIEZ

NO RECTIFIER NEEDED • COMPLETELY ENCLOSED HOUSING • GREATER VIBRATION IMPACT THAN COMPARABLE SIZE UNITS • RUGGED AND DURABLE • LOW FIRST COST • LOW OPERATING AND MAINTENANCE COST

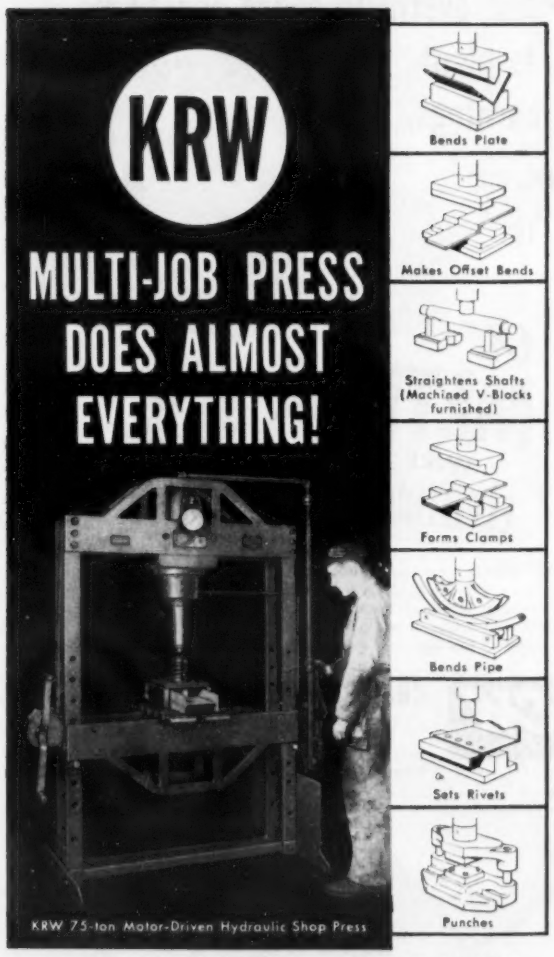
Special Mill Mutual ACCEPTED Units for HAZARDOUS DUSTY LOCATIONS

GET BIG CATALOG . . . WRITE TODAY. Eriez Mfg. Co., 80-KB Magnet Dr., Erie, Pa.

▲ For more details circle NED-87 K8 on enclosed inquiry slip ▲

KRW

MULTI-JOB PRESS DOES ALMOST EVERYTHING!



KRW 75-ton Motor-Driven Hydraulic Shop Press

JACK OF ALL JOBS: This KRW Motor-Driven Hydraulic Shop Press performs all sorts of work that calls for a "squeeze" (up to 75 tons) There's practically no limit to what it can do. The jobs shown above are but a few. Dies can be readily improvised for hundreds of applications.

QUICK CHANGEOVER. It usually takes only a minute or two to switch from one setup to another. As a result, many a KRW shop press that has been purchased for one job is now doing dozens.

SPEED, ACCURACY AND OPERATING EASE: Developed by a maker of numerous types of hydraulic presses, KRW features assure bonus performance: Bed and crown members truss-reinforced. Any pressure up to rated tonnage quickly attained. Convenient lever controls ram. Excellent inching. Spring return of ram. Direct-connected motor drive.

GET THE FULL STORY on this versatile machine as well as other KRW hydraulic shop presses (motor-driven and hand-operated, 25 thru 150 tons). Mail the coupon below.

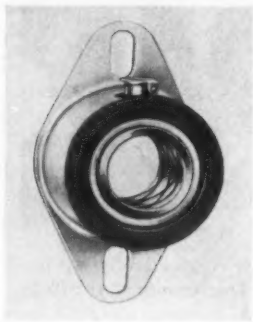
K. R. WILSON, INC.
1228 MAIN STREET, ARCADE, N. Y.

MAIL illustrated bulletins on KRW Motor-Driven and Hand-Operated Shop Presses to us, without obligation.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ ZONE _____ STATE _____

▲ For more details circle NED-88 K8 on enclosed inquiry slip ▲

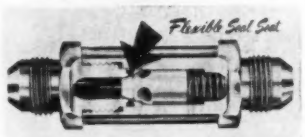
SLEEVE BEARING
in 1/2 through 1-in. shaft sizes



Interchangeable with most two and four bolt units, this two-bolt sleeve bearing is available with a graphited bronze or sintered bronze bushing. Both are self-lubricating. Bearing is designed for flange or side mounting and is offered in shaft sizes from 1/2 through 1 in. One-piece housing is 16-gage steel with cadmium finish. Rubber liner isolates bearing and assures constant controlled self-alignment and quiet operation. Made by **Randall Graphite Bearings, Inc.**, 1007 S. Greenlawn Ave., Lima, Ohio.

▲ For more details circle NED-89 K8 on enclosed inquiry slip ▲

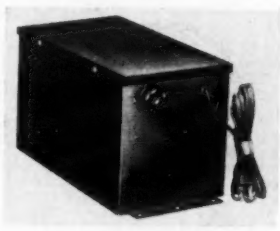
CHECK VALVES
offered in various pipe, tube sizes



Designed to withstand extreme shock, Improved Kep-O-Seal hydraulic and pneumatic check valves retain leak tightness and positive action at very low pressure and full flow with low pressure drop. The spring loaded units are free of vibration and chatter and will handle dirt and foreign particles without loss of sealing action. They are UL-approved for LP gas service and have been tested for rocket and missile use. Six standard Dry-seal pipe and JIC tube sizes and 12 connection combinations are available from stock. Made by **Kepner Products Co.**, 7327 W. 59th St., Summit, Ill.

▲ For more details circle NED-90 K8 on enclosed inquiry slip ▲

STABILIZING TRANSFORMERS
regulate voltage from 95 to 120 v ac



Continuous, automatic voltage regulation is afforded by these voltage stabilizing transformers. They can be built into equipment or can operate as a separate device. They provide output variations of less than ±1/2 per cent for input fluctuations from 95 to 130 v ac, with a rated output of 117 v, 60 cycles, ac. Stabilizing time lag is only a few cycles. Performance is unaffected by power factor or changes in load. Protection from excessive fault currents is built in. Transformers of 250 and 500-w capacities are available at present, with other ratings to be offered soon. Made by **Chicago Standard Transformer Corp.**, 3503 Addison St., Chicago 18, Ill.

▲ For more details circle NED-91 K8 on enclosed inquiry slip ▲

FREE to production men ONE-YEAR SUBSCRIPTION BLACKHAWK® *HYDRAULIC* PRODUCTION COSTCUTS

MAIL COUPON BELOW to get free Blackhawk PRODUCTION COSTCUTS sent to you every month. Each issue is an actual case history, demonstrating how others use Blackhawk hydraulics to speed production all over the shop. You'll also get a permanent file folder for COSTCUTS.

BLACKHAWK MFG. CO. Dept. H14108, Milwaukee 46, Wis.

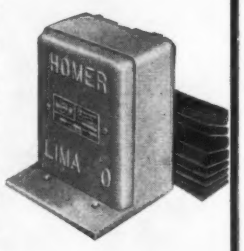
Please send me PRODUCTION COSTCUTS and file folder. I understand there's no obligation.

NAME .....
TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... ZN..... STATE.....

▲ For more details circle NED-92 K8 on enclosed inquiry slip ▲

2 WAYS TO REDUCE COSTS

USE HOMER MAGNETIC SHEET SEPARATORS . . .



To speed handling of round, square, irregular or nested steel shapes in shearing, pressing or other production operations. Automatically separate stacks of oily, polished, enameled or painted sheets without prying, scratching or marring the surfaces.

WRITE FOR BULLETIN SS-210

USE HOMER MAGNETIC SWEEPERS . . .

To cut plant housekeeping costs by quickly and easily keeping aisles and roadways free of ferrous scrap. Homer Magnetic Hand Sweepers available in sweeping widths 12" to 36". Road sweepers, widths 48" to 96".

WRITE FOR BULLETIN MS-250-1

HOMER MANUFACTURING DIVISION
THE OHIO ELECTRIC MANUFACTURING CO.
DEPT. 124 • LIMA, OHIO

▲ For more details circle NED-93 K8 on enclosed inquiry slip ▲

Easily Cuts
10-Gauge Stainless
8-Gauge Mild Steel
3/16" Aluminum and
All Non-Ferrous Metals
Without Distortion

FENWAY NIBBLERS

Will Not Bend or Curl Metal
Lightweight Fully Portable

Models Available to Do Every Cutting Job

Cuts Any Shape, Including Corrugated Metal Without Distortion
PAT. #2278174 #727831f #2535631

Get a Free
On The Job Demonstration

3107 N. Broad St.
Philadelphia 32, Pa.

FENWAY
Machine Company, Inc.

▲ For more details circle NED-94 K8 on enclosed inquiry slip ▲

Compare BAY STATE GRITCLOTH with the abrasive sheet material you now use

RESISTS CLOGGING – Its open mesh lets debris fall through.
SPEEDS WORK – Used on electric sanders or for hand-rubbing, Gritcloth's long life cuts down-time. Its smooth cutting action ensures optimum finish with minimum effort.
ECONOMICAL – You use both sides of Gritcloth so you get more than twice the life out of every sheet. In many applications, Gritcloth lasts as much as *fifteen times* as long as ordinary coated abrasives.
AVAILABLE IN SHEETS, DISCS AND ROLLS of all standard shapes and sizes . . . non-standard sizes available on special order. Available in a wide variety of grit sizes in Aluminum Oxide or Silicon Carbide.

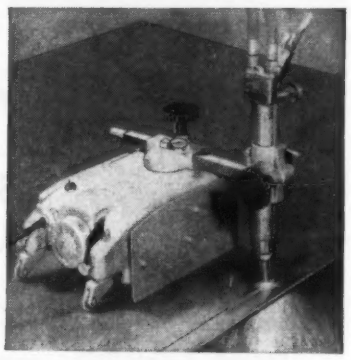
FREE! — *Samples on request*

BAY STATE WHEELS of PROGRESS ABRASIVES

Bay State Abrasive Products Co., Westboro, Mass.
In Canada: Bay State Abrasive Products Co. (Canada) Ltd., Brantford, Ontario. *Branch Offices:* Bristol, Conn., Chicago, Cleveland, Detroit, Pittsburgh. *Distributors:* All principal cities.

▲ For more details circle NED-95 K8 on enclosed inquiry slip ▲

SAVE TIME AND MONEY



with the OXWELD CM-45 Cutting Machine

YOU SAVE TIME because the portable (29 lb.) OXWELD CM-45 will do your cutting, beveling, flame-treating, and even special welding jobs far faster than manual operations. This means *more* production in *less* time.

YOU SAVE MONEY because the CM-45 cuts gas consumption and assures superior cutting results. Rejects and costly finishing operations are eliminated.

Start saving today. Call your nearby LINDE Office for a demonstration, or write for OXWELD Catalog F-4487.

LINDE COMPANY 30 East 42nd Street New York 17, N. Y.

DIVISION OF UNION CARBIDE CORPORATION

"Linde" and "Oxweld" are trade-marks of UCC.

▲ For more details circle **NED-96 K8** on enclosed inquiry slip ▲

SOLVE BEND RADII & TORSION FATIGUE PROBLEMS

SEND FOR THIS INFORMATIVE CATALOG TODAY. OVER 2,000 DIFFERENT TYPES, STYLES & SIZES AVAILABLE

USE CHIKSAN SWIVEL JOINTS!

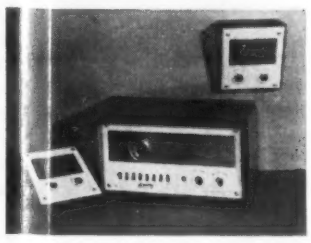
When moving parts cause tight bend or torque on hose lines or when design dictates the use of metal lines, Chiksan Swivel Joints can provide the ready solution. Full 360° rotation, infinite service life, and high safety factor enable Chiksan Joints to literally pay for themselves after short periods of use.

CHIKSAN COMPANY

BREA, CALIF., CHICAGO 5, ILL., NEWARK 2, N. J.
Subsidiaries: Chiksan Export Co., Chiksan of Canada Ltd.

▲ For more details circle **NED-97 K8** on enclosed inquiry slip ▲

INTERCOM SYSTEM also supplies background music



Harmony combination background music and office intercommunication system uses a three-wire system for easy installation. All of the intercom functions can be accomplished while music is being played. Each system consists of a master station with AM or AM-FM ratio, provisions for attaching a record changer, and the desired number of remote stations. These uses are possible: Two-way conversation between any or all stations; background music from radio or record changer played through any selected stations; any station or stations can monitor activities at other stations; intercom can be used alone. Normal conversation can be heard as far as 50 ft from any station. Remote stations can be placed on desk or wall. They have a volume control with a privacy position and a call switch. Made by **Continental Mfg. Inc.**, Dept. A, Omaha, Nebr.

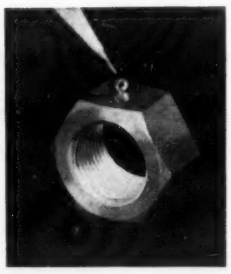
▲ For more details circle **NED-99 K8** on enclosed inquiry slip ▲

WIRE MILL MOVIE shows production of wire from rod

A color-sound industrial film which runs for 22½ min shows the production of finished wire from rod. Entitled "The Red-Strand" the movie takes the viewer through patenting, cleaning, coating, drawing, and spooling steps. It stresses quality testing of wire rope and prestressing strand. To arrange for showing this film, write the Advertising Dept. of **H. K. Porter Co.**, Leschen Wire Rope Div., Dept. N, 2727 Hamilton Ave., St. Louis 12, Mo.

▲ For more details circle **NED-100 K8** on enclosed inquiry slip ▲

TINY PRECISION NUTS of brass have uniform accuracy



Same uniform accuracy as conventional standard sizes is a feature of miniature brass nuts, offered in production quantities. Intended for miniaturized equipment, the machine-turned nuts are tapped square with faces to Class 2 tolerances, countersunk on both sides, and are burrless and degreased. Single or double chamfered hexagon, cap (open or closed end), and knurled thumb types are offered in a range of sizes. Odd and special sizes can be supplied. Photo shows two nuts of identical type and accuracy. Miniature type measures 1/8 x 3/64 in. and weighs 0.11 lb per 1000. Standard size is 1 1/16 x 21/32 in. and weighs 110 lb per 1000. Made by **Fischer Special Mfg. Co.**, 461 Morgan Ave., Cincinnati 6, Ohio.

▲ For more details circle **NED-101 K8** on enclosed inquiry slip ▲

Write for NEW

Brunner AIR COMPRESSOR CATALOGS

Here, for the asking, is the latest and most authoritative information on air compressors that you can obtain.

You'll find full engineering information on the use of compressed air; data that indicates the right compressor for a specific job; tables of computations for correct installation.

Ask for Catalog #36 for a guide to ½ through 20 H. P. Brunner air compressors.

For Brunner 25-30-40-50 H. P. industrial air compressor data, ask for catalog #37.

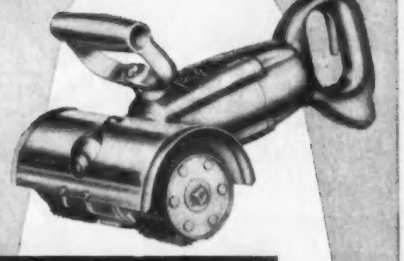
Send for Brunner catalogs today . . . on your letterhead, please.

BRUNNER SINCE 1908 GLOBAL AIR SERVICE

BRUNNER DIVISION
DUNHAM-BUSH, INC.
Dept. N E D • WEST HARTFORD 10, CONN.

▲ For more details circle **NED-98 K8** on enclosed inquiry slip ▲

Chip Away



SCALE
RUST
PAINT

AURAND
CLEANING TOOLS
ELECTRIC OR PNEUMATIC MODELS

Surfaces are cleaned quickly with AURAND on the job. Hardened steel cutters zip away stubborn accumulations from iron, steel, brick, concrete. Adjustable depth shoe protects surface . . . assures uniform cleaning. No special skill required. Renewable cutter heads. Two sizes in both electric and pneumatic models. Lightweight.

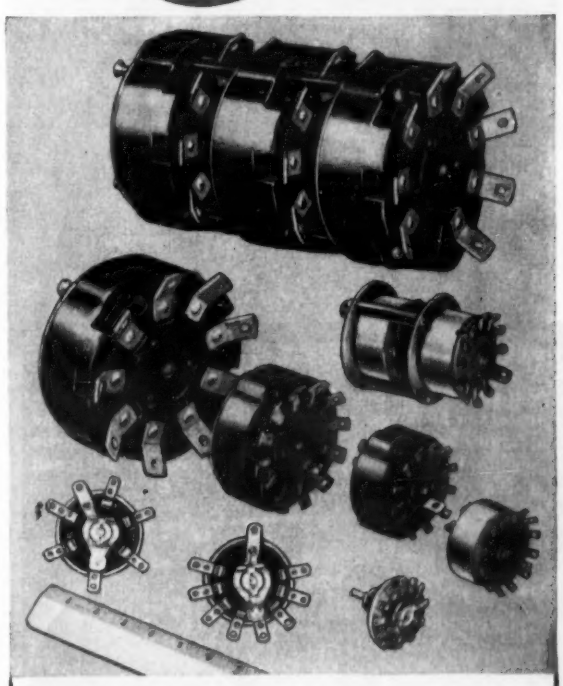
Write for complete details

AURAND MFG. & EQUIPMENT CO.
1322 Ellis St., Cincinnati 23, Ohio

▲ For more details circle **NED-102 K8** on enclosed inquiry slip ▲

COMPACT.. DEPENDABLE

OHMITE® high-current Rotary TAP SWITCHES



Preferred throughout industry

For a-c power switching requirements in the 10 to 100 amp range, Ohmite tap switches are the finest units available. They are load-break, nonshorting, single-pole switches of unusually compact design. Numerous design and construction features provide ruggedness and dependability. Silver-to-silver contacts eliminate contact maintenance. The rotor contact is self-cleaning. The switch shaft is electrically "dead"—insulated by a strong ceramic hub. Ohmite tap switches are available with 2 to 12 taps in the single-pole, nonshorting type. Two or three switches can be grouped in tandem to form multipole assemblies. They are also available in open-type models. Write on company letterhead for Catalog and Engineering Manual No. 58

TAP SWITCH DIALS are available with different numbers of taps from 2 to 12 to agree with the rotations of the various switches and in three diameters to properly coordinate with appropriate knobs.

OHMITE® QUALITY Components

RHEOSTATS RESISTORS
RELAYS TAP SWITCHES
TANTALUM CAPACITORS
R. F. CHOKES
VARIABLE TRANSFORMERS

OHMITE MANUFACTURING COMPANY, 3620 Howard Street, Skokie, Illinois

▲ For more details circle **NED-103 K8** on enclosed inquiry slip ▲

MOST IMPORTANT IN CYLINDERS

DELIVERY ★ 24 HOURS

AND

DESIGN

Rugged, Leakproof, and 40% Savings in Space

Send For Complete Catalog File

All essential ordering details and specifications on the Carter line of cylinders and valves.

CARTER CYLINDERS

PHONE: BAyport 1-7186 (Chicago)

CARTER CONTROLS INCORPORATED
2876 Bernice Road, Lansing, Illinois (Chicago Suburb)

AIR CYLINDERS • HYDRAULIC CYLINDERS • AIR VALVES
ROTARY ACTUATORS • SPECIAL CONTROLS

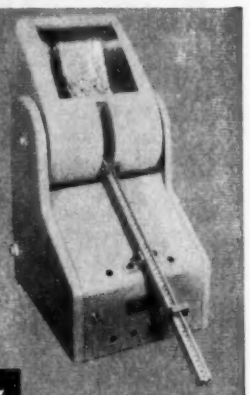
▲ For more details circle NED-104 K8 on enclosed inquiry slip ▲

HOPPERAL

something NEW in small parts feeders

SINGLE TRACK

Orients and releases one or more parts in a single, smooth, sliding motion. Lifts part to track with a minimum of vibration or tumbling action. Fast, versatile, self-contained

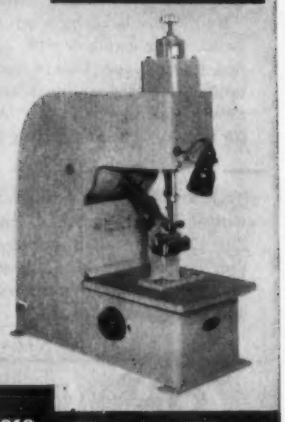


MULTIPLE TRACK

Available with any number of tracks to feed parts to assemblies or other operations where a large quantity of parts is required simultaneously. Can be partitioned and supplied with properly designed tracks to feed unlike parts

HOPPERAL DRIVER

Can be equipped to drive small nails, drive screws, pins, rivets, roll pins and a multitude of similar parts. Will feed small parts for assembly requiring staking, press fitting, peening and riveting

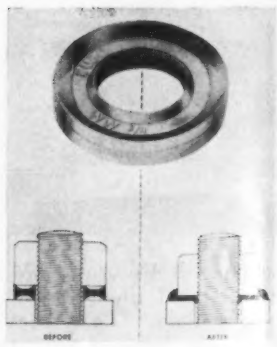


Write for further information about these automated feeders and assembly machines.

HABERSTUMP-HARRIS, INC.
10463 Northlawn Avenue • Detroit 4, Mich.

▲ For more details circle NED-105 K8 on enclosed inquiry slip ▲

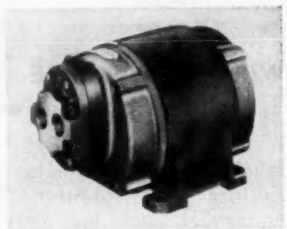
SELF-SEALING LOCKWASHER
unaffected by shock or vibration



Tightening of the nut causes the Nylogrip Dubo lockwasher to "flow," with its inner diameter gripping into the nut and bolt threads. The outer diameter flows over the outer nut edges to lock it and form a leakproof seal. Locking action is unaffected by vibration or shock. Made of Nylon 6 thermoplastic material, it can be reused and has good electrical properties, is nonflammable, and has wear, corrosion, and chemical resistance. Made by **Nylogrip Products**, Dept. ND, 449 Watertown St., Newton 58, Mass.

▲ For more details circle NED-106 K8 on enclosed inquiry slip ▲

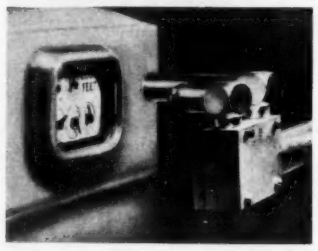
MOTOR PUMPS
capacities from 0.3 to 55 gpm



Series T integral pump and motor units for hydraulic, pressure feed, and transfer work provide 192 pump and motor combinations with capacities ranging from 0.3 to 55 gpm. Pressures range to 400 psi, depending on model. The compact, lightweight units can be mounted in any position. Motors are furnished in 1/4 through 1 hp sizes in open dripproof and totally enclosed frames. Motor pumps are made in short, low, and larger styles, last of which is shown. Made by **Roper Hydraulics, Inc.**, 340 Blackhawk Park Ave., Rockford, Ill.

▲ For more details circle NED-107 K8 on enclosed inquiry slip ▲

DIAL ROTATION DETECTOR
for monitoring or weight control



Extremely sensitive dial rotation detection photoelectric unit for special monitoring applications now has an additional focusing lens for magnification. In operation, every revolution of a pointer actuates a signal. Unit can also be used for weight control on a production line since preadjusted pointer does not pass a predetermined point. Improved circuitry in relay allows further sensitivity in setting thresholds of triggering to meet close discrimination. Made by **Ess Instrument Co.**, Dept. D, 96 S. Washington Ave., Bergenfield, N. J.

▲ For more details circle NED-108 K8 on enclosed inquiry slip ▲

NO OPERATING COST
with these loading dock ramps!

RITE-HITE Full Automatic RAMPS are completely truck actuated... save manpower for other work

Consider, too, these additional Rite-Hite advantages:

*Precision, mechanical counterbalance—no starters, motors, pumps, cylinders, piping, wiring, gears, cables to cause trouble.
*Little or no maintenance—heat, cold, snow, water, ice do not effect Rite-Hite's smooth operation.
*Maximum safety—Rite-Hite's ramp platform can never drop because of a power failure.
*Simplest to install—shipped *completely* assembled for easy installation in simple dock opening.

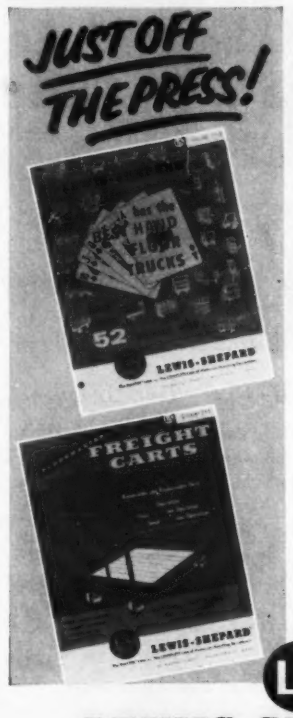
10-TON CAPACITY

You'll want full details. Write Dept. N-108

RITE-HITE DIVISION

LOOMIS MACHINE COMPANY
133 EAST FOURTH STREET, CLARE, MICHIGAN

▲ For more details circle NED-109 K8 on enclosed inquiry slip ▲



"52 reasons why LEWIS-SHEPARD has the BEST HAND FLOOR TRUCKS"

New 8-page folder—Circular 29-D—describes and illustrates 52 different floor trucks. There's a standard or special floor truck that's just right for your operation.

"FLOORMASTER FREIGHT CARTS"

...Complete information on the standard L-S Freight Carts available for your freight terminal and warehouse handling. Ask for L-S Circular 29-E.

LS

LEWIS-SHEPARD®

1710 Walnut Street • Watertown 72, Mass.

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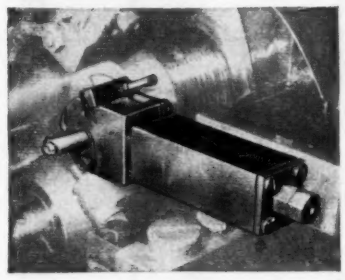
MARK your Screw Machine Parts with AUTOMARX



The only fully automatic roll marker designed for mounting BETWEEN POSITIONS on your multiple screw machine

Only AUTOMARX gives you all these features:

Automatic marking—parts are marked during the machine cycle, the unit resetting itself after each marking. Operates between positions—leaving all positions free for processing. Full-sized characters—product identification symbols, trademarks, part numbers, etc., 1/16" to 1/4" in ht.; rod dia. 1/4". Marks all metals—brass, steel, dural, etc., regardless of spindle run-out. Wide range flexibility—part can be partially drilled, marked and then completely drilled. Particularly advantageous with thin-walled parts which might otherwise collapse when marked.

Simplicity of design permits quick change of marking dies—not necessary to disassemble complete unit. Easy, simple installation.

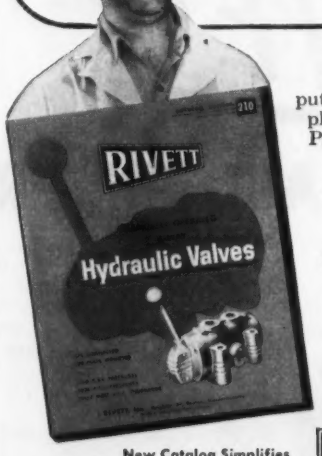
Write for free literature and prices, TODAY!

THE METAL MARKER MFG. CO.

1414 East 40th St. • CLEVELAND 3, OHIO

▲ For more details circle NED-111 K8 on enclosed inquiry slip ▲

IF YOU USE HYDRAULICS— GET THIS FREE BOOK!



Rivett Catalog No. 210 puts at your fingertips complete information on 3000 PSI, Sub-Plate Mounted, Manually Controlled, Series 6100 Hydraulic Valves. Shows performance ratings, flow charts, dimensions, mountings, and ordering instructions. Check on such features as greater flow capacity! (the 1" size is rated at 28.2 gpm at 15 ft. per sec.) Write for your copy of Catalog No. 210!

New Catalog Simplifies Selection and Ordering!

RIVETT

RIVETT, INCORPORATED
Dept. NED-10, Brighton 35, Boston, Massachusetts

Rivett Furnishes A Complete Power Package

▲ For more details circle NED-112 K8 on enclosed inquiry slip ▲

NEW... first truly linear rotameter flow transmitter

The MPT-50 Transmitter is only 5x6x12 inches but full of proven new ideas. You should see it.

Another milestone. The new Brooks MPT-50 Transmitter gives a fully linear pneumatic signal based on true flow rate, not simply float position. The MPT-50 is unique; it increases the accuracy of a transmitted flow signal. Accuracy to 1% is attainable based on air output versus actual flow rate. Extremely low flow ranges are also within the scope of the MPT-50. You can go down to 50 to 500 cc/min. with the same dependable transmission.

Write for Spec. Sheet SS-170-1.

BROOKS ROTAMETER CO.
1058 D STREET Lansdale, Pa.
Specialists in Complete Rotameter Instrumentation
S.A.1810

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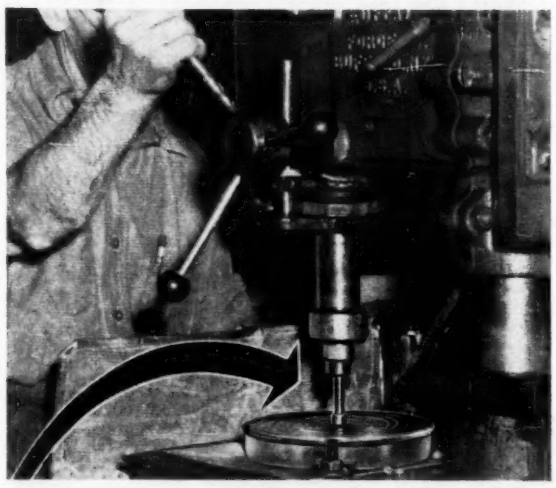
One Hoffman Bit Drills Up to 15,000 Godet Wheels With No Downtime



Up to 15,000 Godet Wheels drilled with center hole tolerance 1.5 min. to 1.53 max.—with one Hoffman Laboratory Bit. Actual production figures that are being duplicated by many Hoffman Bit users for precision drilling of glass, ceramics, quartz, etc. Diamond impregnated or oriented surface set.

Write for Illustrated Literature and Prices—FREE

HOFFMAN BROS. DRILLING CO.
SINCE 1902
106 Cedar Street PUNXSUTAWNEY, PENNA.

▲ For more details circle NED-114 K8 on enclosed inquiry slip ▲

how much can you SAVE on loading, sealing or imprinting corrugated cases?

Put your production-line in high-gear with fully-automatic Packomatic machines which go all the way — or any part of the way — with corrugated shipping containers. Install a new packaging line or add to your present operation. Automate to save time, money. WRITE FOR COMPLETE BROCHURE No. 50A on forming, loading, sealing and imprinting equipment.

BALE SEALERS • CASE SEALERS • CASE IMPRINTERS
CASE FORMER-LOADERS • VOLUMETRIC FILLERS

Packomatic
T.M. Reg. U.S. Pat. Off.

J. L. FERGUSON COMPANY • JOLIET, ILLINOIS

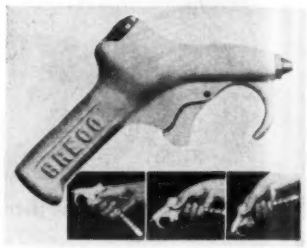
▲ For more details circle NED-115 K8 on enclosed inquiry slip ▲

AC-DC VOLTMETER reads any voltage up to 600 v

Pocket-size Model UV-1 alternating and direct-current voltmeter weighs only 9 oz and fits into the palm of the hand. Four voltage ranges of 0-150 v ac, 0-150 v dc, 0-600 v ac, and 0-600 v dc are selected by rotary switch. Readings are taken by first inserting the safety plug into a receptacle on the instrument, then connecting voltage leads to the line. One lead has insulated clip, the other an insulated prod. Accuracy is within 2 and 3 per cent full scale for dc and ac, respectively. Made by **Columbia Electric Mfg. Co.**, Dept. NED, 4535 Hamilton Ave., Cleveland 14, Ohio.

▲ For more details circle NED-116 K8 on enclosed inquiry slip ▲

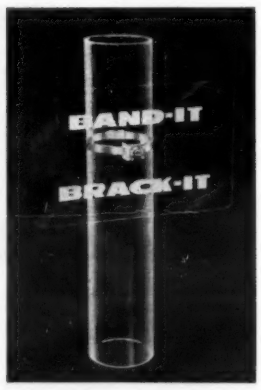
AIR BLOW GUN trigger action releases air stream



Slight natural finger pressure on the trigger of the Breco air blow gun releases any amount of air required. The trigger's cam action operates the balanced piston valve. Contour styling of the gun fits the operator's hand comfortably. A long, straight orifice gives the user good control of air stream direction. Hook type trigger guard serves as a finger safety guard and hanging device. Ten-inch extension nozzles are available in straight and curved types. Made by **Perfecting Service Co.**, Dept. D, 332 Atando Ave., Charlotte 6, N. C.

▲ For more details circle NED-117 K8 on enclosed inquiry slip ▲

SIGN MOUNTING BAND made of stainless steel



Signs can be mounted on any size pole or similar object by the Band-It Brack-It. The stainless steel band provides a permanent, corrosion resistant base to which the sign can be fastened with 5/16-in. stainless steel bolts. The band passes through slots on the Brack-It, forming a clamp which fits any diameter or irregular contour. Signs are quickly removed by unbolting. Made by **Band-It Co.**, 4777-A Dahlia St., Denver 16, Colo.

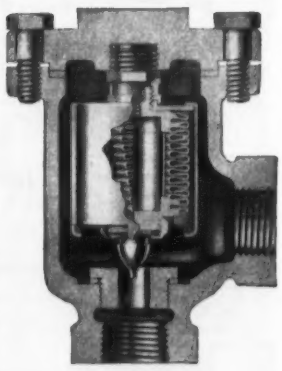
▲ For more details circle NED-118 K8 on enclosed inquiry slip ▲

GREATEST CAPACITY PER DOLLAR COST...

Sarco Thermostatic Steam Trap

And 6 other advantages!

1. **Greatest capacity per dollar cost — 1" size discharges 9,650 lbs/hr at 10°F below steam temperature, 125 psi.**
2. **Same head and seat for 0-300 psi — no change of heads or seats for varying loads and pressures.***
3. **Fewer parts to stock — same bellows, head and seat for 0-300 psi.***
4. **Very compact and light — ¾" size fits in palm of hand. Weighs only 3¾ lbs.**
5. **Freeze-proof—wide open, self-draining when cold.**
6. **Only one working part — the thermostatic element. Inspected or replaced in few minutes without moving trap from line.**
7. **Every trap steam-tested — at rated max. pressure.**



Sizes — ½ to 2"
Write for Bulletin 250

**No 9-300—Cast steel body and cap, with Monel metal bellows*

SARCO COMPANY, INC.
635 Madison Avenue
New York 22, N. Y.

SARCO

2247-F

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2548

DIEMAKERS! this DIE-PART PORTELVATOR®

(OR AN ENGINEERED VARIANT)
will speed your work and ease your "handling."
Top plate raises and lowers for fitting operations and rotates 360° to give easy access to die.

Write for our FREE Bulletin No. 2548. It gives full details.

THE HAMILTON TOOL COMPANY • 901 HANOVER STREET
HAMILTON • OHIO • U. S. A.

▲ For more details circle NED-120 K8 on enclosed inquiry slip ▲

Eliminate expensive "slips" with

ALCOA ABRASIVE TREAD PLATE

An employee slips on greasy metal flooring, injures his back. Medical costs run up to $523.77. Workmen's Compensation is $1,313.30. Additional claims may be as much as $2,000 more. The employer's accident rate is up and production is down while another worker is trained.

This is just one of the 20,000 expensive slipping accidents which kill or injure industrial workers each year. Most of them can be prevented. Alcoa® Aluminum Abrasive Tread Plate remains slip-proof even when wet, oily or greasy. Made of tough particles of fused aluminum oxide, its hard, abrasive surface is the only non-skid floor plate that gives you the advantages of lightweight, corrosion-resistant aluminum.

For more information on how you can eliminate hazardous conditions from floors, stairs, ramps and other areas, check the coupon below; write Aluminum Company of America, 1668-K Alcoa Building, Pittsburgh 19, Pa., or call your nearest Alcoa distributor.

Make Your Own 30-Second Safety Test . . . Send the Coupon for FREE Sample of Alcoa Abrasive Tread Plate.

ALCOA ALUMINUM — Your Guide to the Best in Aluminum Value

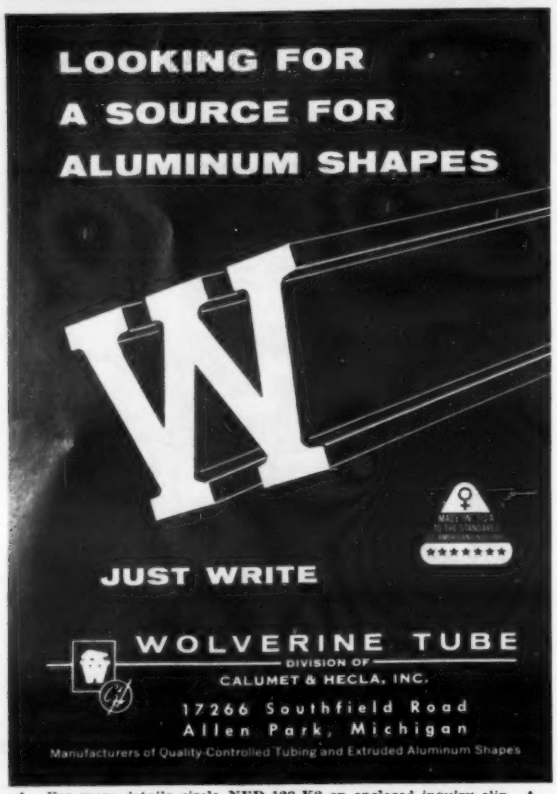
ALCOA THEATRE
Fine Entertainment
Alternate Monday Evenings

Sure-grip Alcoa Abrasive Tread Plate is the best insurance you can buy against slipping accidents.

Aluminum Company of America
1668-K Alcoa Building, Pittsburgh 19, Pa.
I'd like to see how Alcoa Abrasive Tread Plate prevents slipping. Please send me FREE sample—also application, design and fabricating data.
Name and Title .....
Address .....
City and State .....

▲ For more details circle NED-121 K8 on enclosed inquiry slip ▲

LOOKING FOR A SOURCE FOR ALUMINUM SHAPES



JUST WRITE

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17266 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

For more details circle NED-123 K8 on enclosed inquiry slip

USSSCO's new all Plastic SAF-I-SPEC

2 sizes Large or Small for men and women

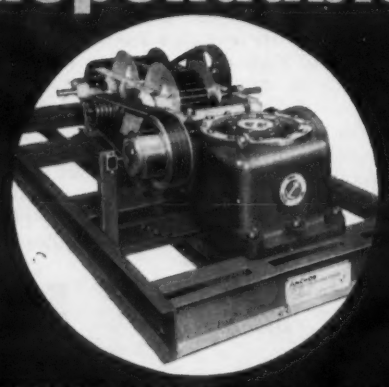
new styling assures wearer acceptance
new design Acetate frames provide greater strength
new light-weight for comfort (new SAF-I-SPECS weigh less than one ounce)
new colors

Comfortable spatula temples . . strong rugged brow-bar . . with or without side shields . . velvet-soft nose piece . . lens locks in place securely . . easily removed without tools . . meets Federal specifications.

UNITED STATES SAFETY SERVICE CO.
DIV. E-2, 1535 WALNUT ST.
KANSAS CITY 8, MISSOURI
BRANCHES IN PRINCIPAL INDUSTRIAL CITIES

For more details circle NED-124 K8 on enclosed inquiry slip

dependable



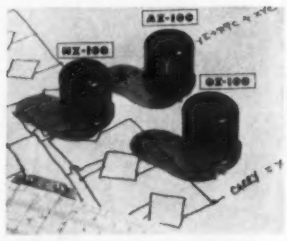
ANCHOR CONVEYOR DRIVES

ANCHOR Overhead Conveyor Drive Units are available in all sizes for constant or variable speeds. ANCHOR Vertical Shaft Reducers and Overload Cut-Outs team up to create sturdy, efficient power units with minimum maintenance requirements. ANCHOR also manufactures Conveyor Trolleys, Turns, and completely engineered and installed systems.

ANCHOR STEEL & CONVEYOR CO.
6906 KINGSLEY AVE. DEARBORN, MICHIGAN

For more details circle NED-125 K8 on enclosed inquiry slip

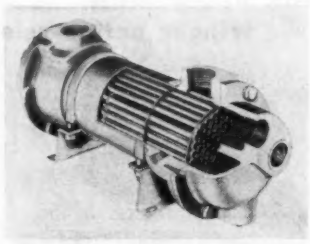
MODULE LOGIC SYSTEM
consists of three plug-in units



Offered as a simple approach to the design of digital logic, the Magnatrol system consists of three miniature 7-pin module cases which are interchangeable. They offer "not," "or," and "and" functions, and are energized by a 100-kc radio frequency power supply. First is a series type pulse amplifier, and other two are silicon double anode, zener diodes. Made by **Hoffman Electronics Corp.**, Semiconductor Div., 922 Pitner Ave., Evanston, Ill.

For more details circle NED-126 K8 on enclosed inquiry slip

STOCK HEAT EXCHANGER
prevents bypass around tube bundle



Design of improved Perfexchanger stock heat exchanger prevents bypass around the tube bundle, increasing efficiency 10 to 15 per cent. Units are offered in sizes from 1.3 to 20 sq ft of surface. Optimum clearance between tubes, shell, and baffles, together with proper tube spacing, further increases efficiency. Universal mounting bracket is detachable and rotates 360 degrees. They are available in single, two, and four pass models in water-to-water capacities from 40,500 to 5,940,000 Btu per hour per 100° F. Oil-water and water-air types are available, also. Made by **Perfex Corp.**, Heat Exchanger Div., 500 W. Oklahoma Ave., Milwaukee 7, Wis.

For more details circle NED-127 K8 on enclosed inquiry slip

ELEVATING TRANSFER BRIDGE
for crossing areas between docks

Hydraulically actuated rigid mechanical supports automatically lock into position as this transfer bridge rises, providing stability and safety under all conditions. Easily and economically installed with a minimum of underground equipment, the bridge has no sustained loads on the hydraulic system. Bridge can be used to cross a railroad siding between shipping docks and for various other materials handling applications. Made by **Autoquip Corp.**, Dept. N, 1140 S. Washtenaw Ave., Chicago 12, Ill.

For more details circle NED-128 K8 on enclosed inquiry slip

Important News FROM MEYERCORD
CHECK AND PIN THIS AD TO YOUR LETTERHEAD AND WE'LL SUPPLY THE FACTS

PLANT MAINTENANCE MARKING KIT
for Marking Water, Heating and Air Conditioning Systems
The modern, low cost solution to plant equipment identification . . . now in use by leading manufacturers and service organizations. Provides standardized identification, absolute legibility, and permanency at remarkably low cost. Kit includes 474 signs assorted over 59 operational subjects. Easily applied in seconds. Check for literature.

LUBRI-CAL MARKING KIT
Take the Guesswork Out of Your Lubrication
An important preventive maintenance program. The *Lubri-Cal Marking Kit* consists of the proper frequency of numerals, letters and instruction nameplates for identifying lubrication points and required lubricants on plant, production and operating equipment. *Lubri-Cals* are permanent, tough, oil-resistant transfers; easily adaptable to any lubrication system.

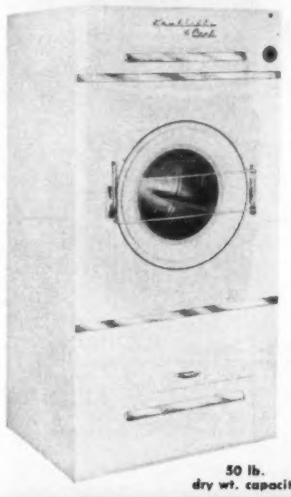
MEYERCORD DECAL MARKING METHOD
Decal product markings for "difficult surfaces"
Heat, abrasion, weather and many of the new industrial surfaces are deadly enemies of most product markings. But not to new, improved Meyercord Decal Markings—types C, G, J and H (heat resistant). One of these new markings will almost certainly solve the problem. For exact recommendations *ask for new brochure.*

the MEYERCORD co.
Dept. A-316, 5323 West Lake St., Chicago 44, Illinois

For more details circle NED-129 K8 on enclosed inquiry slip

Tumblette by Cook
37x30 GAS HEATED TUMBLER

MAKES OTHER DRYERS OBSOLETE!
• ADVANCED ENGINEERING • QUALITY MATERIALS
• SIMPLIFIED CONTROLS • LOW COST OPERATION



50 lb. dry wt. capacity

Exclusive!
TUMBLETTE FEATURES!
- Dodge Friction-Free Power Transmission with 2 YEAR WARRANTY
- Tumblette fully warranted one year.
- Baked-on White Enamel (no extra charge for other colors)
- Baked-on Zinc Chromate Primer coat, both INSIDE and OUT.
- Fiber Glass Insulation, locks on access openings.
- COINETTE flush-mounted meters and timer models available.
- New non-clog 100% safety pilot light.

Write for full information and FREE brochures.

WASHERS • EXTRACTORS
TUMBLERS

Cook Machinery Co., Inc.
4301-T S. Fitzhugh Ave. Dallas 10, Texas

For more details circle NED-130 K8 on enclosed inquiry slip

SAVE $2000 a year
No more old fashioned hand sweeping

Parker FLOOR SWEEPERS

FACTORIES WAREHOUSES SHOPPING CENTERS

Write today for further information on the complete line of Parker Manual and Power Sweepers

PARKER Sweeper Company, Springfield, Ohio
Dept. NE

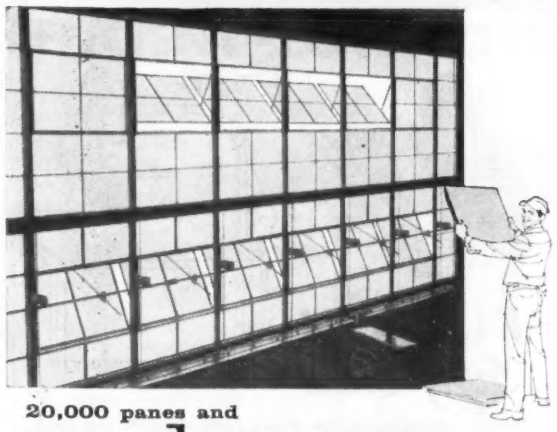
For more details circle NED-131 K8 on enclosed inquiry slip

Magna-tip®
MAGNETIC SCREW DRIVING ACCESSORIES
Increase Output of Any Power Driver

Magna (magnetic) bit holders, finders and sockets fit all power screwdrivers... save money by speeding assembly operations. Permanent, high energy magnets hold screws, bolts or nuts...permit the operator to drive them home without prepositioning or fumbling Made for all types and sizes of screws and hex nuts. Ask your power screwdriver salesman to show you these handy Magna accessories.

WRITE *for manual on the complete line of Magna-Tip bit holders, finders, sockets and hand screwdrivers: Dept. 81G2, Magna Driver Corp., 779 Washington St., Buffalo 3, N. Y.*

For more details circle NED-132 K8 on enclosed inquiry slip



20,000 panes and

no damage...

when Firestone glazed with Structoglas

Hurricanes in Cuba, earthquakes in the Philippines, vandalism in the States made glazing replacement a frequent expense for Firestone's far-flung plants. Easy-to-install glazing of shatterproof Structoglas stopped breakage, let in natural light without harmful ultraviolet. Eliminate costly breakage in your plant. Glaze *once and for all* with Structoglas.

5803

Write for Detailed Literature **structoglas®**

STRUCTOGLAS DIVISION
International Molded Plastics, Inc., Dept. NE10, Cleveland 9, Ohio

For more details circle **NED-133 K8** on enclosed inquiry slip

Sta-Warm for MELTING and MIXING COMPOUNDS

Electrically heated 505 gal. compound melter with propeller type agitator for mixing contents.

For every compound melting application, there is a suitable . . . and efficient . . . Sta-Warm electrically heated compound melting tank or pot *of the right size and specifications* to suit you. Many of these are "standard" models available for prompt shipment. The same high standards of engineering and fabrication that has made Sta-Warm so popular and well known can be applied to help solve your unusual or special compound melting problem.

Inquire today for *new* bulletin featuring Sta-Warm cylindrical tanks, pots. No obligation.

"If You Can Wrap a String Around It, Sta-Warm Can Heat It for You."

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO
Subsidiary of ABRASIVE & METAL PRODUCTS CO.

For more details circle **NED-134 K8** on enclosed inquiry slip

NEW WRIGHT Type "C" Pull-A-Ways

THREE SIZES—1½, 3 and 6-Tons

FEATURES

- Lubricated for life
- Hooks are drop-forged
- Special alloy-steel chains
- Chain sheaves of drop-forged alloy steel
- Gear teeth cut to precision limits
- Load brake is dependable and safe
- Weights: 1½-TON, 23½ lbs. 3-TON, 36½ lbs. 6-TON, 63 lbs.

Write to York, Pa., office for complete information

Wright Hoist Division
AMERICAN CHAIN & CABLE
ACCO
York, Pa., Atlanta, Chicago, Denver, Detroit, Houston, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

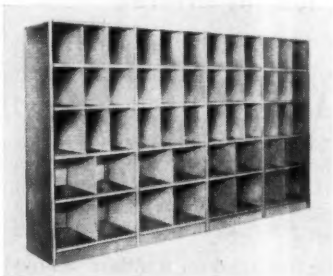
For more details circle **NED-135 K8** on enclosed inquiry slip

PROTECTIVE COATING for metal parts, also lubricates

Adequate moisture, rust, and corrosion repellent properties are provided metal parts and assemblies with only a light residual film of L-7 protective coating. Applied by dip, spray, brush, or cloth methods, coating can be used on products in storage or shipment and has lubricating qualities as well. Tests show the film left after the carrier evaporates will protect sandblasted steel plate for a minimum of 400 hr in a humidity cabinet at 100° F at 100 per cent relative humidity. Film will not drip or run at up to 200° F nor will it gum or harden at −20° F. It is furnished in 5 and 50-gal drums by **American Grease Stick Co.**, Dept. NED, Muskegon, Mich.

For more details circle **NED-136 K8** on enclosed inquiry slip

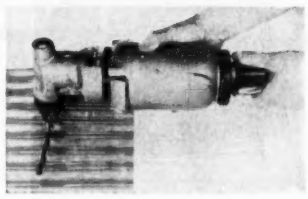
STEEL SHELVING boltless, adjustable, easily erected



Each Uniflex steel shelving starting unit has four simple-to-install upright posts and each additional unit attached to the starting unit requires only two posts. The boltless, adjustable shelving is offered in a bin divider type, with or without a ledge, for efficient inventory control. Dividers are easily adjustable. Open, semi-enclosed, and closed types are also available. Made by **Supreme Steel Equipment Corp.**, Dept. NED, 53rd Street & First Avenue, Brooklyn, N. Y.

For more details circle **NED-137 K8** on enclosed inquiry slip

ELECTRIC METAL NIBBLER will not flatten corrugated sheet



Model 60 electric metal nibbler will start a cut in the middle of a sheet if an access hole for the anvil is provided. It will not distort or flatten corrugated sheet and can cut sheet metal pipe. Capacity is 11-gage steel or 10-gage copper, brass, or aluminum. Radius of the smallest cut which can be made is 3¾ in. Tool is powered by a 115 or 230-v ac-dc motor which provides 700 incisions per minute. Weight with 10-ft cord is 13 lb. Price is $250. Made by **Jemco Tool Corp.**, Dept. J, 22 State St., Seneca Falls, N. Y.

For more details circle **NED-138 K8** on enclosed inquiry slip

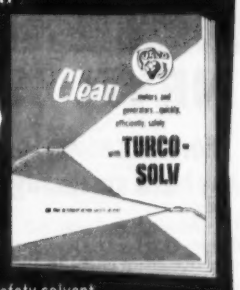
spray clean

- ELECTRICAL EQUIPMENT
- PLANT EQUIPMENT

free folder

tells why . . . only

TURCO-SOLV



the detergent-action safety solvent offers you this unchallenged combination of user benefits

- SAFE ON ALL EQUIPMENT
- NO RESIDUE
- NON-FLAMMABLE*
- PEAK CLEANING EFFICIENCY
- OPTIMUM EVAPORATION RATE
- LOWER TOXICITY

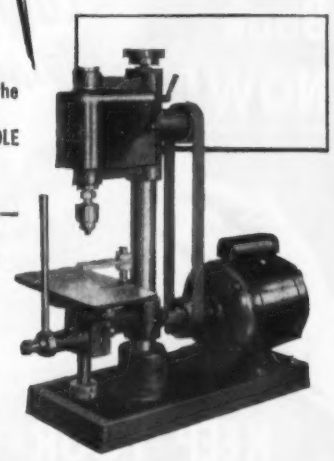
*UNDER NORMAL USE CONDITIONS

TURCO PRODUCTS, INC.
Chemical Processing Compounds
6135 So. Central Ave., Los Angeles 1, Calif.
Factories: Newark, Chicago, Houston, Los Angeles, London, Rotterdam, Sydney, Mexico City, Naha (Okinawa)
Manufactured in Canada by B. W. Deane & Co., Montreal
Offices in all Principal Cities

For more details circle **NED-139 K8** on enclosed inquiry slip

Now

YOU CAN TAP PRECISION HOLES IN BRITTLE MATERIALS OR THIN SHEETS



Recent design change of the HAMILTON SUPER SENSITIVE, SMALL-HOLE PRECISION TAPPING MACHINE

Also extends capacity to:—
.034" x 120 minimum
¼" x 24 maximum

YOU will want full information about this important development!

WE WILL FURNISH IT FREE

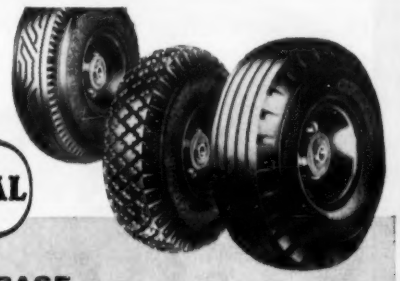
Ask for BULLETIN NO. 2464

ADDRESS
THE HAMILTON TOOL COMPANY
901 Hanover Street
HAMILTON, OHIO

IT'S A **Hamilton Tool**
USE-IT-WITH CONFIDENCE

2464

For more details circle **NED-140 K8** on enclosed inquiry slip



THE GENERAL TIRE

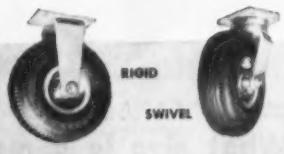
WIDE-BASE PNEUMATICS BY

GENERAL

SAVE TIME, LABOR, MONEY!

Under all job and load conditions, long-wearing General Wide-Base Pneumatics are tops for dependable high-speed performance. Featuring high flotation for easier rolling, they cushion loads and equipment, save high cost floors and floor surfaces, give you greater load capacity. You'll find the exact design you need in General's complete line.

Available separately or in assemblies of tires, tubes and wheels. Size O.D. 8" to 35"—200 to 7890 lbs. capacity for low or high speeds.



CASTER FORKS

Available in identical pairs in a wide range of sizes, these wide-base caster forks are engineered to carry heavier loads without adding dead weight to equipment.

SEND FOR CATALOG, DEPT. 4

THE GENERAL TIRE & RUBBER CO. • AKRON, OHIO

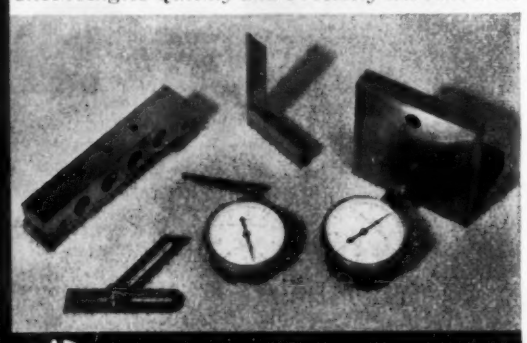
For more details circle **NED-141 K8** on enclosed inquiry slip

KEEP YOUR WOOD BLOCK FLOORS LIKE NEW

THE JENNISON-WRIGHT CORP., TOLEDO 9, OHIO

▲ For more details circle NED-142 K8 on enclosed inquiry slip ▲

Check Angles Quickly and Precisely with the New



AMES DIAL TYPE ANGLE CHECK

ANGLE CHECK, a new dial type measuring instrument, offers you a fast, low cost, extremely accurate method for checking angular parts.

There are two ANGLE CHECKS: Model V for vertical work; Model H for horizontal. Either model takes AMES 200 Series backs. Contact blades are available in various shapes and lengths.

Ruggedly built, ANGLE CHECK saves hours in checking angles on simple and intricate shapes.

The contact blade can be set to a predetermined angle with the dial "0" under the indicator hand. A range of 5°—plus or minus—in increments of 5' can be obtained. ANGLE CHECK is accurate to 5'. Write today for complete information.

Representatives in Principal Cities

B.C. AMES CO.

34 A. ies Street, Waltham 54, Mass.

Canadian Office — B. C. Ames Co., 45 Oriole Parkway, Toronto

MANUFACTURERS OF MICROMETER DIAL INDICATORS AND GAUGES

▲ For more details circle NED-143 K8 on enclosed inquiry slip ▲

What size is a quality fastener?

Here are two ELASTIC STOP® nuts. Each has the familiar red locking collar.* Each is self-locking, vibration proof and reusable. Both stop nuts will maintain an accurate adjustment anywhere on a bolt . . . each prevents liquid seepage along bolt threads and protects against thread corrosion. Finally, each has an unmatched record for quality, both in manufacture and performance.

But . . . one measures 1/10" across the flats; the other, 4". Between these two there are more than 530 different hex nuts in the ESNA line. Look to ESNA for a *standard* self-locking fastener to fit your *special* needs. Write Dept. S2-1037.

*The red locking collar is a Registered Trade Mark of ESNA

ELASTIC STOP NUT CORPORATION OF AMERICA

2330 Vauxhall Road, Union, New Jersey

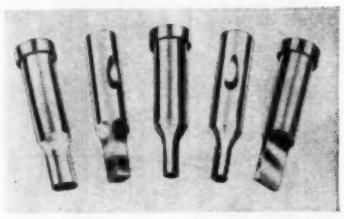
▲ For more details circle NED-144 K8 on enclosed inquiry slip ▲

THERMOCOUPLES resist abrasion, corrosion, erosion

"Built - on" immersion tube of these metal-clad thermocouples and electrical conductors gives them maximum protection with minimum response time. They resist abrasion, corrosion, and erosion, and can be form-fitted to practically any configuration. Range of cable diameters from 0.020-in. OD two-wire to 0.500-in. OD six-wire covers aviation, missile, rocket, industrial, research, and power station instrumentation applications. They have heavy sheath walls, exact centering, and hard compaction of insulating material. Bright outer sheath finish eliminates brazing and welding problems. Any practical wire material can be furnished and the outer sheath can be made from any malleable metal. Made by **Pyro-Electric, Inc.**, Dept. 12, Box 232, Barrington, Ill.

▲ For more details circle NED-145 K8 on enclosed inquiry slip ▲

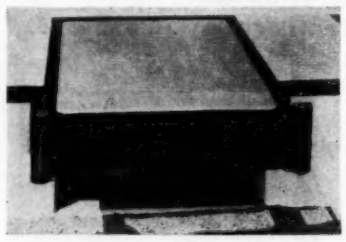
VANADIUM PUNCHES various sizes, lengths offered



Concentricity tolerance of 0.0002 in. between point and shank is a feature of this line of low cost carbon-vanadium punches. A wide selection of square, oval, and rectangular points can be furnished on standard shanks from stock. Many shank sizes, point sizes, and overall lengths in both shoulder type and interchangeable ball seat type punches are available. Made by **Pivot Punch & Die Corp.**, 381 Old Niagara Falls Blvd., North Tonawanda, N. Y.

▲ For more details circle NED-146 K8 on enclosed inquiry slip ▲

AUTOMATIC LOADING RAMP has 10-ton roll-over capacity



Shipped knocked down for assembly at the installation site by the user, the Rite-Hite Model 8A automatic loading ramp will withstand heavy truck and cross - dock traffic. All parts and subassemblies are precision machined and welded. Heavy ribbed ramp platform is counterbalanced and has a 10-ton roll-over capacity in any direction. Ramp measures 96 in. long and 72 in. wide. Bumper actuates dock automatically as truck backs into position. Made by **Loomis Machine Co.**, 140 Fourth St., Clare, Mich.

▲ For more details circle NED-147 K8 on enclosed inquiry slip ▲

NEW! KENSPRAY*

More abrasion/corrosion resistant than any hard surfacing powder you've ever used

Introduced at the A.S.T.E. Show this year, Kenspray is a tungsten carbide spray powder which produces a hard surface overlay tightly bonded to the base metal. The resulting surface has extremely high resistance to abrasion, corrosion and impact.

Using standard metal spraying techniques and equipment, Kenspray gives you the most abrasion/corrosion resistant surface ever . . . plus . . . faster application using less spray powder . . . a smoother, more uniform, longer lasting surface.

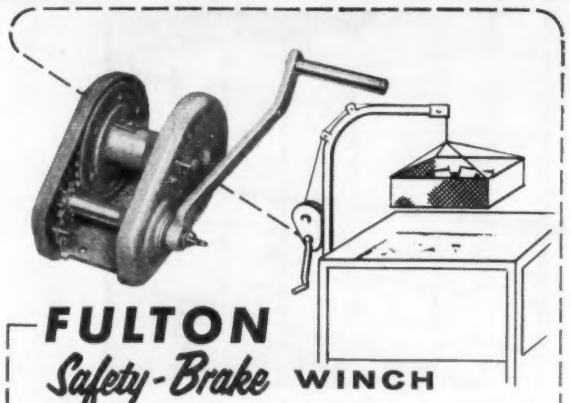
Kenspray is now available in two grades, suitable for use with most all types of standard guns. Overlays may be applied in thicknesses from .010" to .090" for fusing at 1950°F. . . . can be applied to majority of base metals with melting points above 2000°F. Fine finishes may be accomplished with either silicon carbide or diamond grinding wheel.

Get the full story. Call your Kennametal Carbide Engineer or send for Special Products Bulletins L-5 and L-6. KENNAMETAL INC., Dept. NED, Latrobe, Pa.

*Trademark 3187

INDUSTRY AND KENNAMETAL ...Partners in Progress

▲ For more details circle NED-148 K8 on enclosed inquiry slip ▲



FULTON Safety-Brake WINCH

This revolutionary new winch gives complete *one-hand* control of the load at all times. Automatic load-actuated brake safely holds the load whenever the winch handle is released, whether raising or lowering.

Precision stamped gears are concealed to protect operator. Oil-impregnated high pressure powdered iron bearings assure long service life. Easily disassembled for servicing. Model 254, gear ratio 3:1, safe working load 395 pounds, maximum capacity 1000 pounds. Drum has 1¾" hub, holds up to 85 feet ¼" cable.

You'll find many cost-saving applications for the Fulton Safety-Brake winch in your plant. It's economically priced. For complete information on this and other models of Fulton pressed steel winches from 200 to 1800 pounds capacity, write for catalog.

the FULTON CO. 1912 S. 82nd St. Milwaukee 19, Wis.

▲ For more details circle NED-149 K8 on enclosed inquiry slip ▲

Did you ever try to handle a HEAVY roll of paper, drum or barrel?

You can do it easily with the IRONBOUND RÖL TRUK

Did you ever try to handle a HEAVY machine or crate?

You can do it easily with the IRONBOUND PRY BAR

IRONBOUND

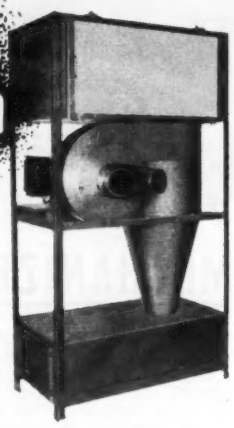
55 Hoffman Place • Hillside, N. J.

▲ For more details circle NED-150 K8 on enclosed inquiry slip ▲

▲ For more details circle NED-151 K8 on enclosed inquiry slip ▲

EFFICIENT—LOW COST

Dust Collection



Easy installation . . . efficient low-cost operation . . . simplified maintenance, make Dustkop *FIRST* among equipment to collect most all industrial dusts. There are Dustkop models to eliminate your dust problems . . . that are space saving, self-contained units, or exhaust type for rafter, ceiling or outside location. Write for descriptive literature.

DUSTKOP STOPS DUST

37 STANDARD MODELS TO CHOOSE FROM

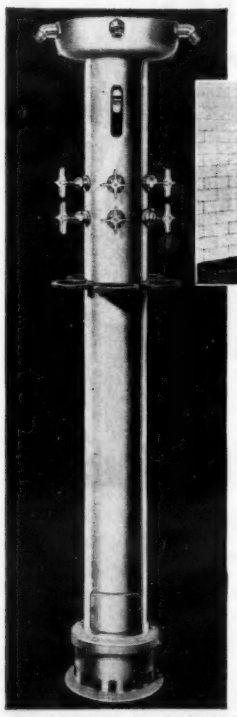
• READY TO USE

Also a Complete Line of Mist Collectors

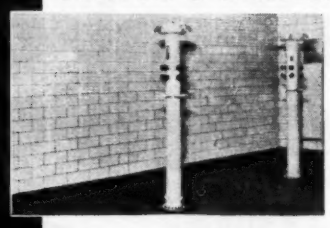
AGET MANUFACTURING COMPANY
1396 E. CHURCH ST. • ADRIAN, MICHIGAN

▲ For more details circle NED-152 K8 on enclosed inquiry slip ▲

BRADLEY SHOWERS



EACH COLUMN SERVES 5 BATHERS



Where shower stall separations are not essential, the Bradley Column Shower offers the lowest cost bathing facilities. One Column provides for five bathers, each with control of water supply and temperature. They are widely used with or without stall partitions and curtains.

Bradley Showers save installation time and cost—3 piping connections instead of 15 required for individual shower stalls for same shower facilities . . . Write for latest edition of Catalog 5601. BRADLEY WASHFOUNTAIN CO., 2253 W. Michigan St., Milwaukee 1, Wisconsin.

BRADLEY multi-person SHOWERS

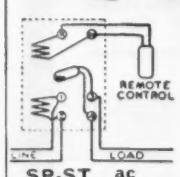
Distributed Through Plumbing Wholesalers

▲ For more details circle NED-153 K8 on enclosed inquiry slip ▲

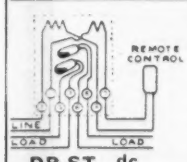
MERCOID®

MERCURY SWITCH RELAYS FOR VOLTAGES TO 440 ac or dc

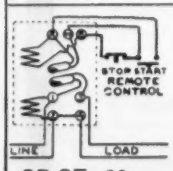
NO SPRINGS OR CLAPPERS
NO WELDING OF CONTACTS



SP-ST ac



DP-ST dc



SP-ST ac start-stop

The operation of a Mercoid Transformer-Relay has several advantages over clapper type relays. In principle, it is a low voltage transformer—the two coils of which, operate as a repulsion relay. The primary coil is fixed in position and connected across the high voltage line. The secondary coil is movable and is connected to the control circuit. When the control circuit is closed, the secondary coil instantly moves upward by repulsion action, thereby operating the hermetically sealed mercury contact. When the control circuit opens, the secondary coil drops by gravity restoring the mercury contact to its original position.

Hundreds of circuit arrangements are available—a few typical examples are shown

WRITE FOR BULLETIN NO. 31

THE MERCOID CORPORATION
4201 Belmont Ave., Chicago 41, Ill.

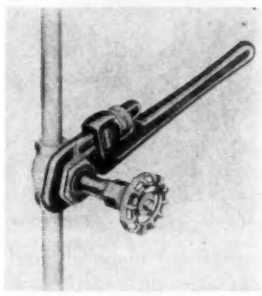
▲ For more details circle NED-154 K8 on enclosed inquiry slip ▲

ELECTRICAL FUEL GAGE for 6 and 12-v vehicle systems

Voltage compensated electrical fuel gage for use on tractors, industrial trucks, saddle tanks for trailer trucks, or on other vehicles is available for 6 and 12-v systems. The remote indicating gage is furnished singly or in panels with standard oil pressure, ampere, and temperature types. UL-approved pressure types are obtainable for LP-gas. Made by **Rochester Mfg. Co.**, 114 Rockwood St., Rochester 10, N. Y.

▲ For more details circle NED-155 K8 on enclosed inquiry slip ▲

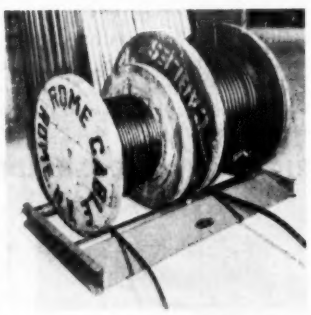
HEX WRENCH has adjustable four-sided jaw



Positive grip on hex, square, and valve packing nuts, unions, and rough or finished gas cocks is provided by the Ridgid hex wrench. It has an adjustable, four-sided jaw that is easy to use. Angular jaw gives good leverage and narrow design permits use in tight places. Three sizes are available: No. 11 for 3/8 to 3/4-in.; No. 17 for 5/8 to 1 1/4-in.; and No. 25 for 1 to 2-in. nuts. Made by **Ridge Tool Co.**, 125 Ridge Rd., Elyria, Ohio.

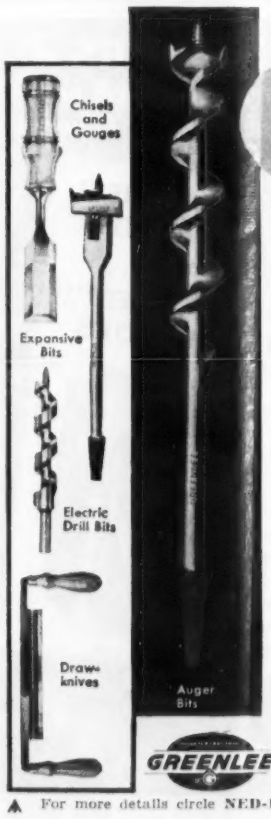
▲ For more details circle NED-156 K8 on enclosed inquiry slip ▲

CABLE REEL HANDLER 24 and 48-in. wide models



Heavy reels of rope, cable, or wire can be efficiently and safely handled with the Roll-A-Reel which has a low, slanted back and a front roller lock for easy loading and unloading. Ball bearing rollers can be adjusted for various reel sizes. Cable can be taken from top or bottom, front or back. Style A is for single reels up to 28 in. wide weighing up to 2000 lb. Style B accommodates two reels up to 24 in. wide each or one 48-in. reel. Its capacity is 4000 lb. The former has one simple lock and the latter has two locks, one for each front roller, plus separate sets of aligned rollers for each reel. Made by **Roll-A-Reel**, 4620 Reading Rd., Cincinnati 29, Ohio.

▲ For more details circle NED-157 K8 on enclosed inquiry slip ▲



quite a bit BETTER!

Between an ordinary tool and a fine one there is quite a bit of difference. The moment you pick up a tool like the GREENLEE 22 Solid-Center Auger Bit, you *feel* that difference . . . the extra workmanship, the proper heat-treating . . . for better cutting edges, greater strength, longer life. And as the days of faster, better work add up, you realize how that difference adds up. It's just about the surest thing a tool buyer can invest in!

WRITE FOR CATALOG of Greenlee *assured-quality* hand tools

GREENLEE

GREENLEE TOOL CO.
1950 Herbert Ave., Rockford, Illinois

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CLEAR PRINT

industrial inks

ENGINEERED TO SOLVE ALL YOUR MARKING PROBLEMS

FOR USE WITH:
Rubber Stamps
Code Marking-Machines
Stencil, Pen, Brush

Whatever the substance, Phillips has an ink to mark it permanently and legibly—or can make one! Clear, sharp, fast drying impressions everytime!

★ Quick Laboratory Service . . . on your problem markings.
★ To Permanently Mark metals, plastics, glass, wood paper, leather, ceramics.

For Complete Information Phone BAker 5-8201 or write:

PHILLIPS PROCESS CO. INC.
58 COMMERCIAL STREET
ROCHESTER 14, N. Y.

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Quick Disconnects for Air—Fluids—Gases

These Series "D" Quick Couplings are interchangeable with all popular makes. They are ideal for fluid or gas applications up to 10,000 p.s.i. for Compressed air lines, Pneumatic tools, Industrial fluids, Instrumentation, Materials handling.

Features
- Small and Compact Greater flow, positive seal
- Quick Automatic Locking Just "plug in". No turning or twisting
- One Hand Operation Fast and easy. Saves time
- Full 360° Swivel Prevents kinking or twisting of hose
- Integral Check Valve Connect or disconnect under pressure
- Brass Sockets Cadmium plated steel plugs
- Pipe Sizes 1/8" through 3/4"

Write for Bulletin #1500

"WHERE *Good Connections* COUNT"©

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N. C.
Baltimore—Buffalo—Camden, N. J.—Chicago
Cleveland—Los Angeles — New York—Providence
Hamilton, Ont.—Montreal—Toronto

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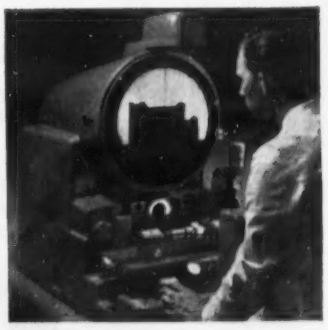


Angles, radii, holes, surfaces . . .

inspect them *all* with one instrument

Optical gaging with a Kodak Contour Projector lets you inspect critical dimensions on a wide variety of components to close tolerances quickly and economically.

Quickly because you can inspect *at a glance*. It's simply a matter of comparing the magnified projected image of the component with a chart gage on the projector screen.

Economically because you eliminate the need for buying a multitude of gages. With a Kodak Contour Projector, you see at a glance what it takes many gages and gaging operations to tell you.

A Kodak Contour Projector can solve your inspection problems in toolroom . . . receiving . . . production . . . final inspection. To find out more about optical gaging, send for the booklet "Kodak Contour Projectors." Write to:

Apparatus and Optical Division
EASTMAN KODAK COMPANY, Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Kodak

▲ For more details circle NED-161 K8 on enclosed inquiry slip ▲

LOOK! Here's how SpiroLox
RETAINING RINGS
Save You Time — Effort — Money!

✓ Save you hours of machining — hours of assembly time! Easy in — easy out.
✓ Save you extra lock parts!
✓ Save you space — insures neater assemblies!
✓ Save you dead weight.

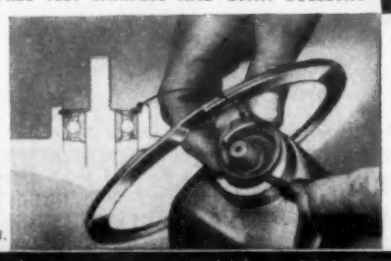
Spirolox has solved hundreds of industry's retaining problems, just like the #612 Drill shown below. Unique, 2-turn construction actually "friction locks" Spirolox into groove. No more keys, pins, collars. Assembly was completed quicker, easier; is more compact, neater, lighter. And Spirolox *always* provides a uniform shoulder.

SEND FOR FREE TEST SAMPLES AND DATA BULLETIN

Let us see a blueprint of your retaining problem.

Ramsey Corporation, a subsidiary of Thompson Products, Dept. F St. Louis 8, Mo.

U.S. Pat. No. 2,450,485 and Foreign Pats. Other pats. pend.



SPIROLOX—the Better Way to Hold Parts TOGETHER!

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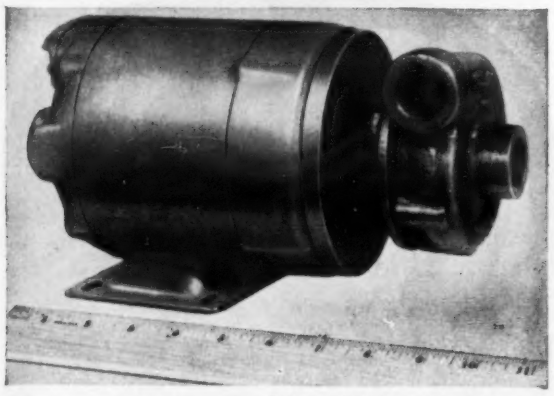


Goulds Fig. 3604 chemical circulating pump

A small pump with big-pump stamina

Here's a compact pump you can use to save space in chemical equipment. It offers advantages in size, weight, cost, and dependable performance.

Size—10½" x 5½" x 5½", small enough to fit tight locations.

Weight—23 lbs. with motor, easily portable in lab or pilot plant.

Performance—dependable heavy duty service round the clock, round the calendar.

Available from stock in 316 stainless steel for corrosive service. Designed for temperatures to 220° F. and working pressures to 75 p.s.i. Capacities to 16 GPM and heads to 28 ft.

For details, ask your Goulds dealer for Bulletin 624A4, or write

GOULDS PUMPS, Inc., Seneca Falls, N.Y.

▲ For more details circle NED-163 K8 on enclosed inquiry slip ▲

production savings quickly pay for
HUMIDITY CONTROL

WITH Guaranteed Bahnson UNIT HUMIDIFIERS

Self-Contained Units Have Low First Cost, Low Operating Cost

with high capacity, automatic controls, units are designed for any size plant or area. They can be installed singly or in groups and require no floor space, minimum maintenance.

TYPE E

FREE! ILLUSTRATED CATALOG

Details complete line of sizes and types to fit your needs. Just clip ad to letterhead and mail today.

NAME _____

THE BAHNSON COMPANY
N-6 *Winston-Salem, N.C.*

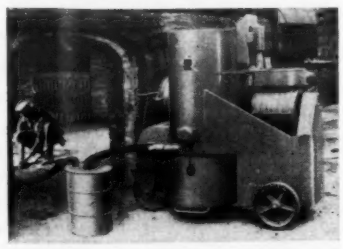
▲ For more details circle NED-164 K8 on enclosed inquiry slip ▲

METAL REMOVAL TORCH operates on 40-psi compressed air

Air control valve is located in the handle of the Model H-2 Arcair metal removal electric torch. By holding the air orifice in the head within 4 in. of the work, the torch can be operated on compressed air as low as 40 psi. Torch is suited for intermittent applications and light uses and has heat resistant molded insulators. Price is $49.50. Made by Arcair Co., Dept. 111, Box 431, Lancaster, Ohio.

▲ For more details circle NED-165 K8 on enclosed inquiry slip ▲

PORTABLE PNEUMATIC SYSTEM is usable as portable pneumatic conveyor or as vacuum cleaner

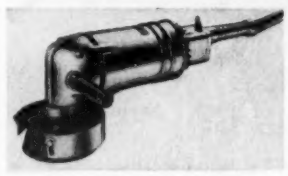


Rapid, economical, safe movement and recovery of such materials as rock granules, plastic pellets, and gritty or pulverized substances are possible with two models of Hoffco - Veyors. They will also convey a variety of dry materials and corrosive chemicals. These portable pneumatic systems have inlet valves to take 1½ to 2-in. vacuum hoses so that they can also be used as vacuum cleaners or dust collectors.

Easily turned in their own length, machines can be wheeled to any location in the plant. They convey from 50 to 100 lb per min continuously or intermittently. Where quantities exceed 7½ cu ft, standard 55-gal drums can be used as auxiliary collectors. Drum adaptor covers which provide inlet and outlet connections are easily shifted from one drum to the next. Made by **U. S. Hoffman Machinery Corp.**, Dept. LL, 103 Fourth Ave., New York 3, N. Y.

▲ For more details circle NED-166 K8 on enclosed inquiry slip ▲

RIGHT ANGLE GRINDERS in 1, 1½, and 2 hp, 3-phase models



Line of right-angle head, three-phase electric grinders, rated 1, 1½, and 2 hp, delivers constant speed of 3400 rpm under load. Grinders have a 1:1 ratio and do not have brushes, commutator, nor rotor windings. Tools are equipped with guards and 20 ft of flexible water and oilproof, dirt-free conductor. Distributed by **Flinn & Dreffein Engineering Co.**, 36 S. Wabash Ave., Chicago 3, Ill.

▲ For more details circle NED-167 K8 on enclosed inquiry slip ▲

30 YEARS of Engineering Skill and Manufacturing Prowess
KISCO tomorrow's ENGINEERING... TODAY

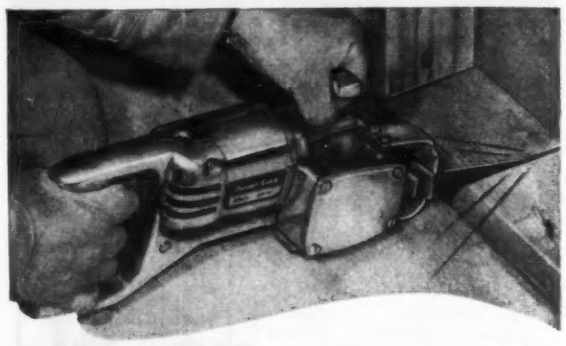
MORE FOR YOUR MONEY!
More Heat...for a Longer Time ... at Lower Cost!

KISCO SILENT "GAS-HEET" RECIRCULATORS

It's new, improved, to give you a better heater. It's engineered for quiet operation, fuel economy and complete heat distribution. It's built for easy installation, rugged, dependable service and long life with practically no maintenance. Sizes and models for every need. Write for catalog.

Tomorrow's Engineering . . . TODAY
Kisco Boiler & Engineering Co.
2400 DE KALB ST. ST. LOUIS 4, MO

▲ For more details circle NED-168 K8 on enclosed inquiry slip ▲



MECHANIZE *every cutting job!*

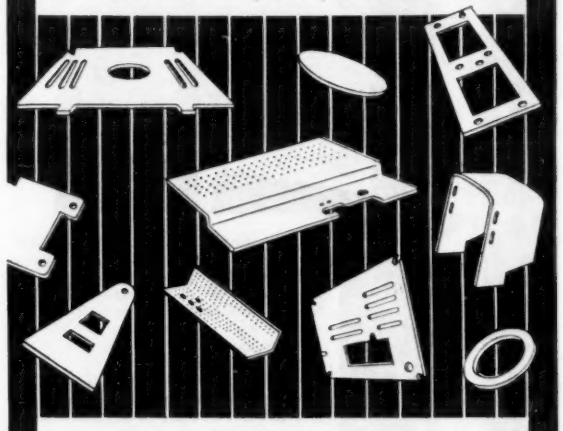
Extra-heavy-duty Multisaw tackles every job from roughing-in to complicated scroll cuts. For wood, metal, plywood, plastic laminates, plaster. Has original Orbital Action—teeth engage only on cutting stroke, back away on relief stroke. This means faster cutting, longer blade life, easier plunge cutting, vibrationless handling. Offset blade can cut with ⅝" of uprights. Load speed reaches 4250 SPM. Contoured handle and trigger switch assure positive control of cut and power. See your Porter-Cable dealer. Try the Multisaw yourself. Write for descriptive folder and find out how it brings time-saving economy to scores of jobs.

Porter-Cable *Quality Power Tools*

PORTER-CABLE MACHINE COMPANY
8120 Marcellus St.
Syracuse 4, N. Y.

▲ For more details circle NED-169 K8 on enclosed inquiry slip ▲

Huge stocks...wide variety of
MASONITE PANELS
fabricated to your specifications



- *Improve product quality*
- *Smooth out production kinks*

You can select the exact Masonite® hardboard you need for your product's design—and the Masonite fabricator will work it up quickly the way you want it. You'll save on inventory, equipment and warehousing costs.

Only Masonite produces so broad and versatile a line of hardboards—dense, grainless panels that add quality so many ways.

And the Masonite fabricator near you will cut, punch, shape, drill, sand, bend or laminate these panels to close tolerances.

Find out now how you can start new products off right...improve quality in current products with Masonite panels. Find out the economy offered by the Masonite fabricator's speedy service and expert technical help. Call the nearest fabricator in the list below. For a free booklet, write Masonite Corporation, Dept. NED-10, Box 777, Chicago 90, Illinois.

Call your nearest fabricator of famous Masonite panels:

MASONITE FABRICATORS
- Blue Ash and Hunt Road, Cincinnati 42, O.
- 1577 Rio Vista Avenue, Los Angeles 23, Calif.
- 600 Progress St., Elizabeth, N. J.
- 500 Carolina Ave., Thomasville, N. C.

HARDBOARD FABRICATORS, INC.
59 Branch St., St. Louis 7, Mo.

MIDLAND BLDG. INDUSTRIES, INC.
907 E. Michigan Ave., Indianapolis 6, Ind.

K. W. MUTH CO.
2215 Union Ave., Sheboygan, Wis.

NEW ENGLAND HARDBOARD CO., INC.
80 Fremont St., Worcester 3, Mass.

SOUTHWEST HARDBOARD FABRICATORS, INC.
2901 Stanley, Fort Worth, Tex.

SPRINGER-ATLAS PRODUCTS CO.
404 E. Wisconsin Ave., Milwaukee 2, Wis.

WOODALL INDUSTRIES, INC.
- 3500 Oakton St., Skokie, Ill.
- 7565 E. McNichols Road, Detroit 34, Mich.
- Monroe, Mich.
- Laurel, Miss.

®Masonite Corporation—manufacturer of quality panel products.

▲ For more details circle NED-170 K8 on enclosed inquiry slip ▲

BOWSER

PORTABLE WHEEL TANK

TRANSPORTS LIQUIDS . . . . QUICKLY . . . . SAFELY

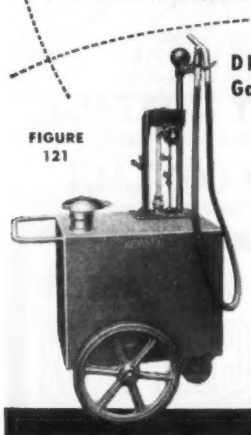


FIGURE 121

DISPENSES AND REGISTERS
Gallons, ½ Gallons, Quarts, Pints

Oils, solvents, process liquids . . . are all transported quickly, easily, safely . . . and dispensed accurately in controlled quantities. A piston-type measuring pump with counter records up to ten gallons and repeats or resets. Protecto-Seal fill-and-vent with built-in flame arrestor assures safe handling of flammable liquids. Anti-drip nozzle. 50-gallon tank. Convenient delivery hose.

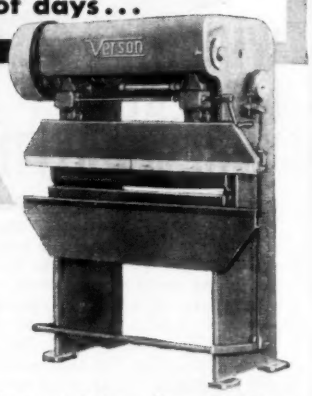
ALSO AVAILABLE . . .

Figure 63	Figure 172	Figure 41	Figure 109
Measures quart, pint, or ½-pint. Anti-drip nozzle. Pump is lockable. 65-gal. tank.	Completely enclosed. Hinged, lockable cover. Same pump and tank as Figure 63.	Floor stand pump for low-level tanks. Measures gals., ½ gals., qts., pints. Lockable.	Dispenses and records gal., ½ gal., qt. and pt. quantities. 65 or 120-gal. tank.

BOWSER, Inc., 1381 EAST CREIGHTON AVENUE FORT WAYNE, INDIANA

For more details circle NED-171 K8 on enclosed inquiry slip

$1600* will put this Power Press Brake to work in your shop in a matter of days...



IMMEDIATE DELIVERY FROM STOCK

STANDARD DIES
48" long, 90° "V" dies for handling 16 ga. stock in the 16-48 are priced at $102.

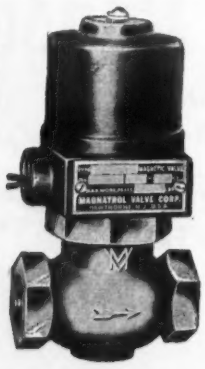
If you're trying to "get by" without a power press brake . . . or if you're tying up big brakes on small jobs . . . here's the answer to your problem — a rugged Verson Model 16-48 press brake. You can get one right "off the shelf" for only $1600*. You get the famous Verson all steel construction plus proved-in-service Verson design. Capacity is 16 ga. x 48" of mild steel. Write for complete specifications and then place your order. That's all there is to it . . . no involved proposals . . . no delays.

*Prices F.O.B. Chicago, less dies, subject to change without notice.

ORIGINATORS AND PIONEERS OF ALLSTEEL STAMPING PRESS CONSTRUCTION
VERSON ALLSTEEL PRESS CO.
9329 S. Kenwood Avenue, Chicago 19, Illinois
8300 S. Central Expressway, Dallas, Texas

For more details circle NED-172 K8 on enclosed inquiry slip

Eliminate Costly Flow Failures



Magnatrol SOLENOID VALVES

Quick Operating *Non Sticking* *Tight Seating*

These three design advantages are your assurance against costly flow failures. Attain dependable, accurate, automatic or remote control of liquids or gases with Magnatrol Valves. Installed quickly and easily in connection with . . . flow-meters, thermostats, float and time switches. Every Magnatrol Valve is delivered to you—factory tested—guaranteed free from defects in material and workmanship.

Available in normally closed or normally open models. Pressure ranges from zero up to 300 PSI. Voltages to 575.

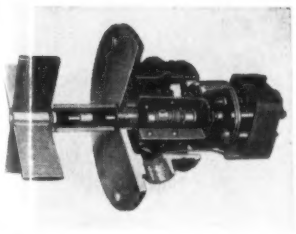
Catalog containing complete specifications mailed upon request.

Magnatrol

Magnatrol Valve Corp.
Fifth Avenue
Hawthorne 8, New Jersey

For more details circle NED-173 K8 on enclosed inquiry slip

BIN LEVEL CONTROL starts, stops accessory equipment

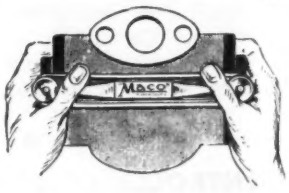


An easy-off cover and fail safe design are featured by the Model B Bin-Vue level indicator and control for bulk bins. In operation, a 1/100-hp motor turns a four-blade paddle at 9 rpm by means of a torsion spring. When material makes firm contact with paddle it stops and motor continues to run, turning spring until it activates a limit switch. This kicks off the motor and any equipment connected to the indicator. Unit operates on 120-v ac and has a single-pole double-throw limit switch. Acting as a fail safe device, the switch is activated 18 times a minute and can be connected for visible or audible control. Made by Convair, Dept. N, Box 9761, Pittsburgh 26, Pa.

For more details circle NED-174 K8 on enclosed inquiry slip

ADJUSTABLE TEMPLATE makes profile of any design

Profile of architectural shapes, molds, dies, patterns, saw mill shapes, and many other objects can be obtained with the Maco adjustable template. Made in England, it has a number of very fine (0.007-in. thick) hard drawn, solid brass strips which are displaced for accurate contour reproduction. The laminations adapt themselves to the exact shape of the object against which they are pressed. The thumbscrews hold the profile once tightened. Illustration shows a profile of a pipe flange being reproduced. Available from Woodworkers' Tool Works Inc., Room 116, 222 S. Jefferson St., Chicago 6, Ill.



For more details circle NED-175 K8 on enclosed inquiry slip

UNIVERSAL FACE SHIELD has clear or green windows

Adjustable to fit any facial contour, Trojan face shield has knob at back of polyethylene head band to select head size. Top band adjusts quickly to head shape with pin lock. Clear or green acetate windows in 4, 6, or 8-in. lengths and 0.02 and 0.04-in. thicknesses are securely installed on the wide fiber spark guard with three snap fasteners. Made by Welsh Mfg. Co., 12 Magnolia St., Providence 9, R. I.

For more details circle NED-176 K8 on enclosed inquiry slip

WHY PAY THEM TOP WAGES TO WAIT?

New McCaskey System stops costly waiting at tool crib—adds more working time at machines—increases production

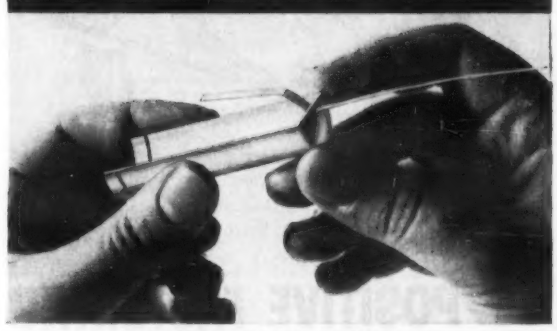
New advances in McCaskey's famous Tool Crib System allow crib attendants to prepare kits of tools for jobs in advance. Machine operators simply pick them up, or they may be delivered.

Job-tested in hundreds of plants, the new McCaskey System cuts costs dozens of ways. Pays for itself in 90 days. Write today for free booklet NED-1058.

McCASKEY Industrial Controls
Tools • Gages • Scheduling • Job Assignment
Division of
VICTOR ADDING MACHINE CO.,
Chicago 18, Ill.
Victor Adding Machine Co. (Canada) Ltd., Galt, Ontario
Manufacturers of Business Machines, Cash Registers, Business and Industrial Systems, Electronic Equipment, Electri-Cars.

For more details circle NED-177 K8 on enclosed inquiry slip

FREE ANALYSIS OF YOUR SMALL METAL PARTS JOINING PROBLEMS



WELDING TIME CUT IN HALF!

PROBLEM: join an aluminum tab to the inside, and a tinned copper lead to the outside of this aluminum capacitor can. **SOLUTION:** A Raytheon Welding Analyst suggested making both welds at once; helped select the proper welding equipment and set-up for the job. **RESULT:** welding time cut in half.

HOW YOU CAN BENEFIT—
If you have a small metal parts joining problem, see your Raytheon Welding Analyst. He will be happy to help you find a solution—without cost or obligation. Write Dept. NP10

RAYTHEON

RAYTHEON MANUFACTURING COMPANY
Commercial Equipment Division, Industrial Products Dept., Waltham, Mass.

For more details circle NED-178 K8 on enclosed inquiry slip

FASTER THAN A HAMMER

BETTER THAN TACKS

BOSTITCH T-5 Tacker for light tacking jobs all around your plant

Wherever you have a man hammering tacks is a place the T-5 can probably save you time and money. Give you better results, too.

Just press the T-5's nose where you want a staple. Squeeze. A powerful spring drives the staple full depth into the work. One hand, one squeeze—drives a staple every time. Your other hand is free to hold or position the work.

Use the T-5 to tack in tight places. You can move in close on corners or against nosing. Use it for hundreds of fastening jobs. It takes staples with leg lengths of ¼", ⅜" and ½" interchangeably. Loads from the front. Can't clog or jam.

Used by companies of all kinds to fasten shipping tags, install wiring, fasten screening, line freight cars, nail light wooden cases, pad crates and, many other jobs.

Staples and service by factory-trained Bostitch technicians available without delay

FREE TRIAL OFFER

Try the T-5 in your plant, on your own work. Test it for speed, accuracy, operating ease and superior fastening. Circle the number below on the Service Card in the back of this publication. We'll arrange for a prompt demonstration and furnish detailed facts on the benefits the Bostitch T-5 will give you.

Fasten it better and faster with

BOSTITCH
STAPLERS AND STAPLES

690 Briggs Drive, East Greenwich, R. I.

For more details circle NED-179 K8 on enclosed inquiry slip

GET **POSITIVE FASTENING**
EVERY TIME WITH...
HANSEN AUTOMATIC TACKERS

FOR
Labeling
Displays
Decorations
Insulation
Assembly
...many others

36 MODELS... 80 STAPLE SIZES— HANSEN TACKERS outperform all others with their remarkable fastening speed and efficiency. Comfortable fit, positive action, trouble-free dependability... insist on the genuine HANSEN TACKERS. SEND POSTCARD for free booklet!

A. L. HANSEN MFG. CO.
5164 Ravenswood Avenue • Chicago 40, Illinois

▲ For more details circle NED-180 K8 on enclosed inquiry slip ▲

WORLD'S **NO.1** INDUSTRIAL MARKER!
King Size
FLO-MASTER
Felt Tip Pen

Marks BIG & BOLD on any surface!
Especially designed for heavy duty use at your Shipping Room Table—Factory Bench.

King Size Flo-master has a greater ink capacity, uses larger felt tips (up to 1" wide) than any other marking instrument. For use with: • Transparent marking inks, *all colors* • Paint-like, opaque pigments, *all colors* • Most industrial solvents

Dual-purpose, snap-on cap may be screwed to table or work bench as a convenient, permanently-secured receptacle. Installed as shown, receptacle is airtight, keeps felt tip always moist, clean and free from factory dust and dirt, always ready for instant-marking on metal, glass, wood, plastics, rubber, fabrics.

By the makers of the *pocket-size* Flo-master Felt Tip Pen—"The Standard of all Industry."

At your marking equipment supplier —or write to

Dept. NE-10
CUSHMAN & DENISON
Carlstadt, New Jersey

QUALITY PRODUCTS FOR 75 YEARS

▲ For more details circle NED-181 K8 on enclosed inquiry slip ▲

PRECISION CHAMPION ®

NEW
short sleeve expanding mandrel

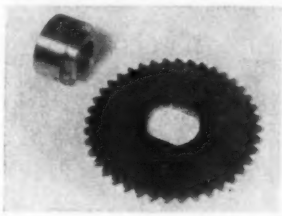
Champion precision expanding mandrels are now available with short sleeves which save 25% to 35% of your cost. Precision of .0002" T.I.R. in all sizes is guaranteed with 100% inspection before shipment. Standard sizes are available from 5/32" to 9½" O.D. All mandrels have several sleeve sizes to fit each arbor for greater economy. We have the mandrel that fits your requirements exactly—and we can supply most sizes from stock today.

Send for free catalog giving complete line, specifications and prices

THE WESTERN TOOL & MANUFACTURING CO., INC.
SPRINGFIELD, OHIO FAIRFAX 3-9151

▲ For more details circle NED-182 K8 on enclosed inquiry slip ▲

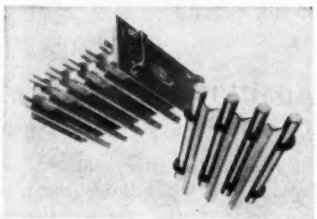
DIE-CUT SPROCKETS
with 11-80 teeth for roller chains



Line of die-cut sprockets for roller chains includes types with or without shouldered hubs, and with 11 to 80 teeth. Plate type is furnished with a flatted hole to receive the flatted shouldered hubs. They can also be provided with plain round holes in plain 1020 steel or case hardened to order. Cost savings of 50 to 60 per cent reportedly accrue from use of stamped sprockets. Made by **Dayton Rogers Mfg. Co.**, 2822 13th Ave. S., Minneapolis 7, Minn.

▲ For more details circle NED-183 K8 on enclosed inquiry slip ▲

PERMANENT GRID MAGNET
removes ferrites in free-flow goods



Ferrous contamination is removed from grain, chemicals, food, seeds, drugs, and similar free-flowing materials by the Magni-Power permanent grid magnet. It is offered in both single bank or drawer types and is easily adapted to chutes or hoppers of any shape. Structure is of stainless steel. Cleaning is facilitated by pull-out tubes. Special web ends and deflectors are available. Made by **Magni-Power Co.**, Dept. 20, Wooster, Ohio.

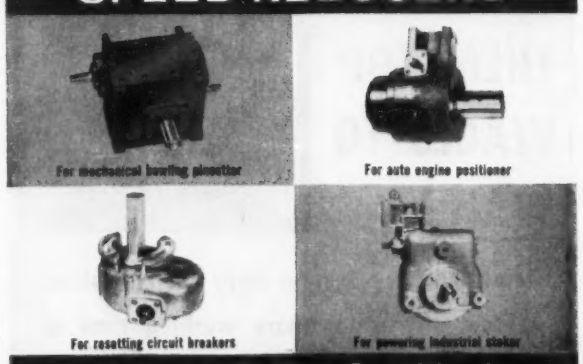
▲ For more details circle NED-184 K8 on enclosed inquiry slip ▲

AUTOMATIC DOOR CONTROL
for right or left-hand swing doors

Needless or excessive opening of doors to warehouse and refrigerated areas can be minimized by installation of the Door-O-Matic automatic door control. It can be adapted to function with any material handling system or combinations of systems, with operation by electric eye, pushbutton, pull switch, chain control, pressure, or conveyor line trips. The control fits right or left-hand swinging doors of all sizes and weights without alteration. Operation is on 50 to 150-psi air lines and 110-v ac electric lines. Two easy settings govern speed and door opening and closing. Made by **J F & J Co.**, 811 Parrish St., Philadelphia, Pa.

▲ For more details circle NED-185 K8 on enclosed inquiry slip ▲

Special OHIO
SPEED REDUCERS



"Engineered" To Your Specifications

• If the design of your machine calls for a *special* speed reducer . . . OHIO is the place to get it! An experienced staff of power transmission engineers can help you modify a standard reducer to solve your problems or, design and build an entirely new speed reducer to meet the demands of your application.

Contact your local OHIO Distributor or write direct for assistance in solving your special speed reducer problems.

Get Your Free Catalog — 186 pages packed with useful information on gears and speed reducers

Manufacturers of gears and speed reducers-both stock and special

hio **OHIO GEAR Co.**
1320 E. 179th ST. • CLEVELAND 10, OHIO

▲ For more details circle NED-186 K8 on enclosed inquiry slip ▲

get
SNAP-ACTION
as you want it...

1 MOMENTARY CONTACT
(press to start—release to stop)
2 MAINTAINED CONTACT
(press to start—press to release)

LINEMASTER®
CLIPPER
FOOT SWITCHES

Size: 4½" x 3½" x 1½"
Weight: 2½ lbs.

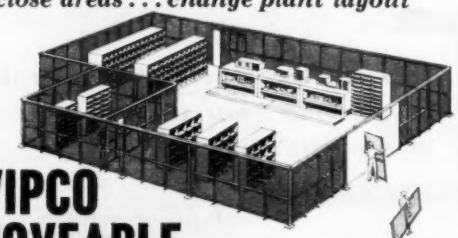
WRITE TODAY for bulletin and prices
Let us quote on your switch requirements.

These famous momentary and maintained contact Clipper Footswitches have proven themselves by years of field usage. Long electrical and mechanical life in SPDT and DPDT versions. High electrical ratings for inductive and motor loads. Rugged cast iron housing. Safety guard available. Easy wiring to #8 screw terminals.

LINEMASTER SWITCH CORP. 424 Woodstock Terrace Woodstock, Conn.

▲ For more details circle NED-187 K8 on enclosed inquiry slip ▲

New low-cost way to set up a department, enclose areas . . . change plant layout



WIPCO MOVEABLE WIRE PARTITIONS

NO SPECIAL TOOLS... NO SPECIAL CREWS NEEDED—*your own men* set them up, relocate them . . . *at less than the cost of wood framing and wire netting!* Everything you need—Standard panels plus all accessories (doors, windows, top panels, bars, braces, etc.)—available immediately from factory stock. Made of tough, machine woven steel wire, Wipco Partitions protect areas against theft and loss, permit ventilation and visibility . . . economical to maintain. *For firm price, send free hand sketch of areas to be enclosed.*

Write Today for Bulletin P-55

Wire and Iron Products, Inc.,
1727 Sixteenth St., Detroit 16, Mich.

WIPCO

▲ For more details circle NED-188 K8 on enclosed inquiry slip ▲

Loosens FROZEN PARTS **FAST!**

Handy
Won't Leak
Shoots 3 Feet

Same formula as famous Kroil that has pleased 14,000 industrial users for 10 years or more.

Loosens stuck together metal parts, bushings, bearings, bolts, screws, pipe, etc., "anything from an embalmer's needle to a bulldozer," one customer said.

"Like an extra employee," said another. "Turned rust into mush, put $50,000 equipment back to work."

You too can get these results.

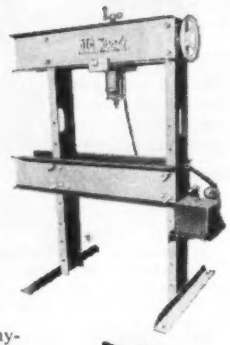
Try Aerokroil at our risk. Send $2 cash, and we'll pay postage.

12-OZ. CAN $2.
F.O.B. NASHVILLE
CASE OF 12 $18.75

KANO LABS. 1074 S.Thompson Lane Nashville 11, Tenn

▲ For more details circle NED-189 K8 on enclosed inquiry slip ▲

INTRODUCTORY OFFER! OTC HYDRAULIC SHOP PRESS BONUS DEAL



To introduce you to the time-saving and profit-making advantages of having a rugged, versatile OTC hydraulic shop press, we are making this special "bonus" offer!

This deal is worth looking into! Get all the details about the special press features, the range of sizes and capacities, the famous OTC Power-Twin center-hole hydraulic rams and pumps which are detachable for use with OTC pullers.

You'll find out why an OTC hydraulic shop press is the unit for you and your shop . . . and why the special "bonus deal" which is going on right now is worth your while. Your OTC distributor has all the details. Contact him now or write us.

FREE MANUAL on OTC hydraulic shop presses; 12 pages. Write for your free copy today.

OWATONNA TOOL COMPANY
436 Cedar Street Owatonna, Minnesota

For more details circle NED-190 K8 on enclosed inquiry slip

JARKE MINI-MODULE STOCK STORAGE RACKS

Most efficient and flexible storage of short, medium and long lengths of bar, rod and pipe stock.

Pre-fabricated Modular Units Quickly Set Up Or Taken Down By One Man

No Bolts, No Tools, Lightweight

Special nesting caps permit fast no-slip stacking, rigid vertically-interlocked tiers. Stack them to fit your needs exactly. Heavy-duty tubular steel construction.

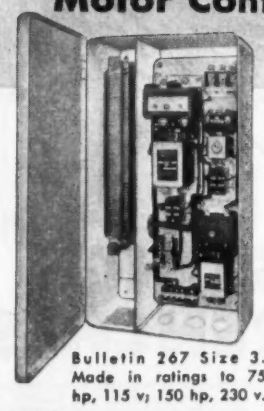
JARKE MANUFACTURING COMPANY
6333 Howard St., Niles 31, Illinois

Send for details and FREE set of miniature plastic Mini-Modules for easy storage planning.

BAR AND FLANGE RACKS • WIRE COIL RACKS • CRANE GRABS • STEELMOBILE

For more details circle NED-191 K8 on enclosed inquiry slip

ALLEN-BRADLEY makes Quality D.C. Motor Control, Too!



Bulletin 267 Size 3. Made in ratings to 75 hp, 115 v; 150 hp, 230 v.

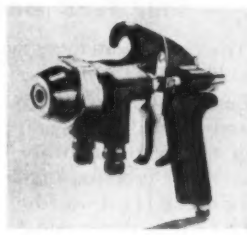
Here's just one of the heavy duty starters in Allen-Bradley's complete line of d-c motor control—Bulletin 267 automatic reduced voltage starter. Send for details on this and other Allen-Bradley d-c starters. They *all* carry the Allen-Bradley trademark of *quality*.

Allen-Bradley Co.
1334 S. Second St., Milwaukee 4, Wis.
In Canada: Allen-Bradley Canada Ltd., Galt, Ont.

ALLEN-BRADLEY MOTOR CONTROL QUALITY

For more details circle NED-192 K8 on enclosed inquiry slip

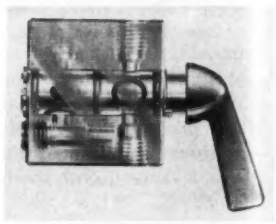
FOAMED PLASTIC SPRAY GUN applies rigid urethane foam coat



Spray gun for rigid urethane foam applies thicknesses from 3/16 to 2 in. in a continuous operation. Build-up material has high strength, light weight, and good thermal and acoustical properties. The gun makes it possible to spray the highly adhesive plastic to practically any material, even on vertical or overhead surfaces without sagging. Gun sells for $1200. Made by **DeVilbiss Co.**, 301 Phillips Ave., Toledo 1, Ohio.

For more details circle NED-193 K8 on enclosed inquiry slip

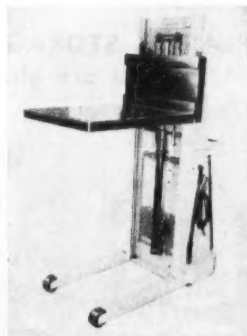
THREE-WAY PLUG VALVE for both gas and liquid circuits



O-ring sealing on the face and diameter of the plug assures leakproof shutoff of this 9300 Series three-way plug valve. The general-purpose valve for both gas and liquid circuits has inlet, outlet, and exhaust ports. One inlet and two outlets, or two inlets and one outlet can be arranged when used as a selector valve. It operates in −40 to 250° F range at pressures from −14.7 to 150 psi. Made by **Circle Seal Products Co.**, Dept. 381, 2181 E. Foothill Blvd., Pasadena 8, Calif.

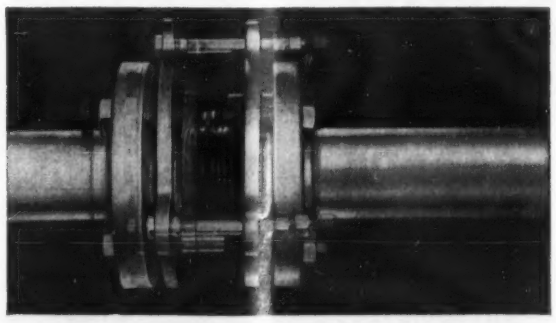
For more details circle NED-194 K8 on enclosed inquiry slip

PORTABLE ELEVATORS operated by a 12-v battery system



Platform lift, fork lift, hinged, telescopic, and drum handling models comprise the Weld-Bilt Hy-Boy Verti-Lift line of lightweight portable electro-hydraulic elevators. They are suited for moving, stacking, or lifting in close quarters or for short moves. Each unit is operated by a 12-v battery system which can be recharged by its own overnight charger from any 110-v ac circuit. Standard model has a 64-in. lift, solid platform, and capacity of 1500 lb. A fork lift elevator is available for pallet handling. Forks are adjustable in width, and the base can be supplied in varying widths. Lowered heights on Hy-Boy hinged and telescopic models permit them to pass through standard doors. Drum model handles, lifts, and empties drums. Made by **West Bend Equipment Corp.**, 329 Water St., West Bend, Wis.

For more details circle NED-195 K8 on enclosed inquiry slip



Fluoroflex®-T expansion joints molded from Teflon®

stand higher dynamic pressure

- **Work over wide pressure range** — with twice burst strength, after flexing, of ordinary bellows machined from Teflon.
- **Molded, not machined** — undamaged grain structure and interior convolutions that don't fatigue and crack.
- **Unequalled flex life** — special Teflon compound gives 20 to 30 times flex life of ordinary bellows.
- **Corrosion-proof** — universally useful with all fluids and piping; inert to virtually all solutions.
- **Send for bulletin B-1** for full operating data. RESISTOFLEX CORPORATION, Roseland, N. J. Western Plant, Burbank, Calif., Southwestern: Dallas, Tex.

® Fluoroflex is a Resistoflex trademark, reg., U.S. pat. off.
® Teflon is DuPont's trademark for TFE fluorocarbon resins.

Dept. 144

RESISTOFLEX

For more details circle NED-196 K8 on enclosed inquiry slip

NEW TESTMASTER

Large and Small Dials
.0001" and .0005" Grads.

SERIES L
8 MODELS
2 STYLES

LONG RANGE

Up to four times the range you'd expect in a test indicator.

HIGH MAGNIFICATION

At least twice the magnification of other type test indicators. Many other features. Write for brochure and prices.

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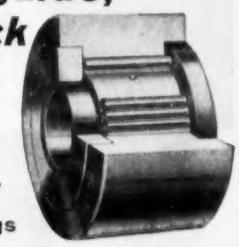
81710 Eddy Street, Providence 1, R. I.

Ask FEDERAL First
FOR RECOMMENDATIONS IN MODERN GAGES . . .
Dial Indicating, Air, Electric, or Electronic—for Inspecting, Measuring, Sorting, or Automation Gaging

For more details circle NED-197 K8 on enclosed inquiry slip

For shaft mounted cam follower, guide, support or track roller bearings



Use McGILL Heavy Duty CAMROL® CYR Bearings

These precision heavy-duty cam yoke roller bearings are especially built to provide cam follower advantages for shaft or yoke mounting.
Sturdy roller retaining end plates are tightly fitted and secured to the end shoulders of the non-separable inner ring. An extra heavy outer ring withstands high shock loads. The full complement of precision ground small diameter rollers supports heavy loads in small radial space.
Standard roller diameters from ¾" to 4" cost less than improvised units.

Write for helpful Bearing Handbook No. H-54-B

engineered electrical products
McGILL®
precision needle roller bearings

McGILL MFG. CO., Bearing Div., 101 N. LAFAYETTE ST., VALPARAISO, IND.

For more details circle NED-198 K8 on enclosed inquiry slip

ASSURES TIGHTEST POSSIBLE SOLDERED SEAMS

. . . without any acids
. . . without any cleaning
. . . use 50-50 or 95-5 or other soft solders with equal assurance

With LA-CO Flux you can be sure of sound, leak-free soldered jobs every time. Its modern formulation clears the way for a perfect alloying of solder and metal . . . and stretches your solder dollars too.

LA-CO Flux makes physical cleaning and sanding old-fashioned. All the muscle is built right in, yet it costs no more. It works right through metal oxides, oil and grease — definitely *fluxes right through the chemical treatment coating on galvanized metals.*

Yet, with all this self-cleaning power, LA-CO Flux is completely free of acids. It will not stain metals or injure workers . . . is safe for use with foodstuffs, oxygen lines, etc.

LA-CO Flux (Regular) is used for soft soldering of copper, lead, galvanized iron, tin, zinc and other common metals.

See for Yourself! Hack-saw a LA-CO Fluxed soldered job in half and see the perfect bond. Write on company letterhead for sample of LA-CO Regular Flux (Liquid).

There are other LA-CO Fluxes for all specialized needs . . . in liquid, paste or handy stick form. Flux problems: Let our laboratories help; no obligation, of course.

The Lake Chemical Co., 3052 W. Carroll Ave., Chicago 12, Ill.

For more, details circle NED-199 K8 on enclosed inquiry slip

there are
MORE styles . . .
MORE sizes in

GRC die cast WING NUTS

Yes, GRC offers the widest range to choose from—hundreds of stock sizes—thousands of thread and blank combinations.

Smart in appearance with their exclusive finger-grip wings, they have smooth-acting washer like bases and a bright, corrosion-resistant, rustproof finish, that can be used "as is" or plated.

Most important, GRC's unique mass-production die casting methods guarantee greater uniformity, closer tolerances, clean threads . . . and lower costs.

Ask about other GRC fastenings—die cast, cap nuts, thumb nuts and screws, wing screws and rivets; molded nylon screws, washers and screw insulators. You'll find them most economical!

Write TODAY for prices and GRC's New Fastener Catalog.

GRIES

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
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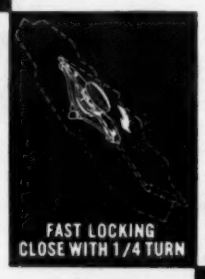
QUICK, POSITIVE LOCKING

LION QUARTER-TURN FASTENERS

Just one quarter turn of the stud, and the Lion Fastener locks securely . . . can't shake loose or open by itself. One-piece, rugged, swaged-nose steel units hold under extreme conditions of shear, tension and vibration. High strength — low weight ratio. A variety of heads available.

• Approved for aircraft
• Alignment and stack height not critical



SEND FOR FREE FASTENER HANDBOOK
Write to: Southco Division, South Chester Corp., 243 Industrial Highway, Lester, Pa.

SOUTHCO FASTENERS LION
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Bench Tops
LAMINATED HARD MAPLE

Steel bench bases, legs and drawers available for use with Tolco Tops. Write for complete illustrations and prices.

ESTABLISHED 1894
THE TOLERTON COMPANY
265 N. FREEDOM AVE. • ALLIANCE, OHIO
▲ For more details circle NED-201 K8 on enclosed inquiry slip ▲

3-D MILLING MACHINE has hand hydraulic tracing control, four feed movement combinations

Traverse of table and saddle for 360 - deg horizontal profiling and vertical movement of the spindle quill for vertical profiling are controlled by the three - dimensional hand-guided hydraulic tracer of the Model 1 - C Contourmaster milling machine. Deflection of the stylus results in a corresponding movement of table, saddle, and spindle quill, separately or in unison. Maximum horizontal feed rate is 25 ipm.

A rapid traverse rate of 50 ipm is available for positioning the table and saddle. The conventional hand wheels can also be used for positioning. A vertical feed-adjusting dial determines the maximum "down" feed rate of the spindle, a feature useful when machining hard, tough metals.

Four combinations of feed movements are available for machining of small trimming and stamping dies, some die casting dies, and plastic molds. In one setting, the full 22-in. table travel and 10-in. cross travel can be used for 360-deg hand guided profile milling cuts. Ram mounting of the spindle carrier permits milling of work wider than 10 in. in two settings. There are eight spindle speeds from 215 to 5650 rpm. Made by **Cincinnati Milling Machine Co.**, Marburg & South Streets, Cincinnati 9, Ohio.

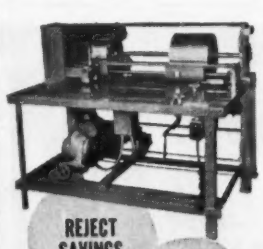
▲ For more details circle NED-202 K8 on enclosed inquiry slip ▲

PLASTIC STORAGE BUILDING panels are glass fiber reinforced

Storage of industrial and commercial supplies and equipment is provided by this 10 x 12 x 7-ft Kemhut, a storage building made of glass fiber-reinforced translucent plastic panels. Building is verminproof, is unaffected by mild acids and alkalies, and may be hosed down inside for quick cleaning. The quickly assembled building can be staked to the ground like a tent, or secured to a perimeter of wood 2 x 4's. It can also be bolted to a foundation for permanent installation. Delivered package measures 7 x 4 x ½ ft. Made by **Kemlite Corp.**, 100 N. Republic Ave., Joliet, Ill.

▲ For more details circle NED-203 K8 on enclosed inquiry slip ▲

START THIS MARKING PROFIT PARADE
. . . . . use industrial's NEW AUTOPRINTER!



With the new, modern Autoprinter, you date, mark or code multiwall bags and containers as you need them! Completely automatic and electronically controlled, the Autoprinter works right with your production line . . . at up to 3,000 impressions per hour!

Investigate how the Autoprinter can speed your operation, save container pre-printing and storage costs, and eliminate costly manual marking expense.

Write for details and catalog
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REJECT SAVINGS
INCREASED PRODUCTION SAVINGS
PRE-PRINT SAVINGS
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ime INDUSTRIAL MARKING EQUIPMENT company, inc.
655 BERRIMAN ST. BROOKLYN 8, N.Y. NI 9-3305
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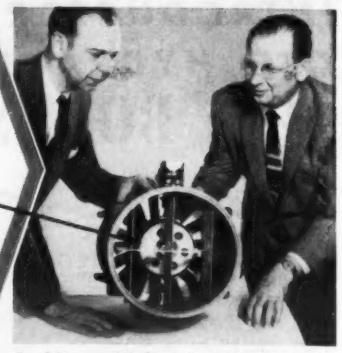
KLIXON 3-PHASE AIRCRAFT MOTOR PROTECTORS

Guard Against Overtemperature in AiResearch Condenser Fan



Roy Schinnerer, left, Senior Project Engineer, and Elvin Lytle, Design Specialist, examine the AiResearch Condenser Fan used on the Boeing 707.

AiResearch Manufacturing Division of the Garrett Corporation, long a leading manufacturer of electro-mechanical components and air conditioning systems for aircraft, is a major user of KLIXON Inherent Overheat Motor Protectors.

Elvin Lytle, Design Specialist of AiResearch, selected a 3-phase KLIXON Motor Protector for use in this 10 HP electric motor driven condenser fan, a component of the vapor cycle air conditioning system on the Boeing 707 Jet Stratoliners ordered by American Airlines. In this application, the KLIXON Protector shuts off the fan motor if excessive inlet air temperature or inadequate air flow causes the motor windings to overheat.

You, too, can get motor burnout protection by specifying and using motors with built-in KLIXON Protectors.

METALS & CONTROLS CORPORATION
Spencer Division
3310 Forest Street, Attleboro, Mass.
KLIXON
▲ For more details circle NED-205 K8 on enclosed inquiry slip ▲

POR-ROK (POUR ROCK)
Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN 30 MINUTES!

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.

For complete information—without obligation—write

THE HALLEMITE MFG. CO.
2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1927
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Fine tools that encourage Good Work

ARMSTRONG WRENCHES

If you don't know your local ARMSTRONG Distributor, we will send you the names of those in your area.

An ARMSTRONG Wrench feels right—is balanced. It goes over nuts or screw heads easily, grips firmly without sloppiness, won't round corners—because openings are carefully machined to correct sizes. It's safe, strong beyond need without clumsy bulk—because of superior design and selected steels, heat treated to proper degree of hardness and tensile strength. It's quality finished, ARMALOY (alloy steel) Wrenches in chrome plate with heads buffed; HI-TEN (carbon steel) Wrenches in baked-on gray enamel with heads ground bright . . . all plainly marked for size. All are uniformly excellent tools manufactured under strict quality control, by modern methods, with modern equipment in a modern tool plant . . . 1537 different industrial sizes and types —single wrenches, or sets in metal cases, boxes or rolls . . . each a quality tool. Armstrong Wrenches are "Fine tools that encourage good work."

ARMSTRONG BROS. TOOL CO. 5245 W. ARMSTRONG AVE. • CHICAGO 46, U.S.A.

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Guaranteed
GREATER ACCURACY
than any other Variable Speed Drive

ONLY Graham
most reliable variable speed drive made

offers these BIG FOUR FEATURES!

1. UNLIMITED SPEED RANGE — from any desired maximum speed to zero, including reverse, without stopping motor.
2. UNMATCHED ACCURACY — of speed setting and resetting, and speed holding.
3. ULTIMATE in SIMPLICITY and COMPACTNESS — a straight line extension of a standard induction motor — or available without motor.
4. AUTOMATED SPEED CONTROL — control tension, proportion, synchronization, etc. from any control signal; 3 to 15 PSI, .5 to 5 ma, potentiometer, frequency, or binary signal from punch cards, tapes, or computers.

SEE OUR CATALOG IN SWEET'S PRODUCT DESIGN FILE OR WRITE FOR COPY

GRAHAM TRANSMISSIONS, INC.
DEPT. NED • MENOMONEE FALLS, WISCONSIN

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NEW from SIGNODE

Valuable Free Booklet
•
"BETTER WAYS TO PACKAGE, UNITIZE, AND SHIP"

Here are 48 useful pages of facts about steel strapping methods, tools and equipment to help you simplify and reduce the cost of handling, storing, and shipping.

Describes and illustrates modern, better ways in which steel strapping saves weight, reduces damage, eliminates pilferage, improves stacking and carloading. Describes various kinds of Signode strapping, seals, pneumatic, electric and hand operated strapping tools, dispensers and other accessories.

Send now for your free copy.

SIGNODE STEEL STRAPPING CO.
2643 N. Western Avenue, Chicago 47, Illinois
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Instant Temperature Determinations
in seconds!

XACTEMP® Hand Pyrometers
and Interchangeable Thermocouples

Here's all you need for quick, accurate temperature determinations in countless processes and operations—irregular and hard-to-reach surfaces, molten materials, dies, aircraft engine cylinders, driers, ovens, etc., and stationary or revolving surfaces. The XACTEMP line of hand pyrometers offers wide choice of models and range of applications.

Recommended for field service, laboratory, and production line use.

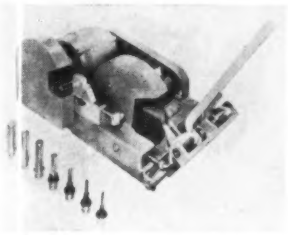
8279

Write for Bulletin No. XT-351 gives description, prices, and uses for all models.

CLAUD S. GORDON CO.
Manufacturers • Engineers • Distributors
621 West 30th Street, Chicago 16, Illinois
2013 Hamilton Ave., Cleveland 14, Ohio

▲ For more details circle NED-210 K8 on enclosed inquiry slip ▲

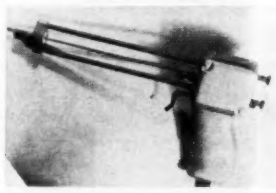
HOSE-CUTTING MACHINE
for 1/8 to 2½-in. ID hose



High tensile steel cutting wheel of the No. CS-75 hose cutting and skiving machine has a durable serrated cutting edge for effective cutting action. It will cut any type of hose, including two-wire braided type, from 1/8 to 2½-in. ID. A carrier locks hose into position and spreads it to prevent binding and blossoming as it is forced into the cutting wheel. Skiving range is 1/4 to 1½ in. ID. Quick-change, snap-in mandrels are furnished in a range of sizes. A standard vacuum blower attachment (optional) may be adapted to clear chips from both operations. Made by **Weatherhead Co.**, Ft. Wayne Div., Dept. P, 128 W. Washington Blvd., Ft. Wayne, Ind.

▲ For more details circle NED-211 K8 on enclosed inquiry slip ▲

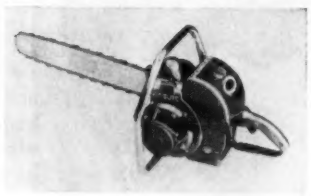
SPOT PANEL WELDER
welds from one side, no distortion



One-side welding of cabinets, electronic equipment, housings, appliances, and other equipment is possible with this spot panel welder. Usable with alternating or direct current welding machines rated 125 amp or more, tool combines speed, convenience, lightness in weight, and compactness for use even in difficult-to-reach areas. It uses a powdered-iron-coated welding rod which, with the starting tip, arcs immediately on contact with the work. Rods are available in 1/16 and 5/64-in. diameters. Tool will also join light-gage metal to heavier sections. Made by **Schott Metal Products Co.**, Dept. NE-100, 2225 Lee Rd., Akron 6, Ohio.

▲ For more details circle NED-212 K8 on enclosed inquiry slip ▲

PORTABLE CHAIN SAW
cuts through 18-in. tree in 18 sec



This 18-lb Zip chain saw which is supplied with 12-in. bar and chain will cut through an 18-in. tree in 18 seconds. It has a short-stroke air-cooled gasoline engine, all-position diaphragm carburetor, automatic clutch, safety chain guard, and large air filter and fuel tank. It has enough power to fell trees up to 3 ft in diameter. Blades in sizes from 12 to 21 in. an be attached. Made by **Homelite**, 622 Riverdale Ave., Port Chester, N. Y.

▲ For more details circle NED-213 K8 on enclosed inquiry slip ▲

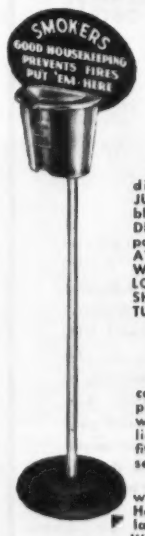
CIGARS-CIGARETTES-MATCHES
immediately extinguished
...with
SIPCO DUNKING STATIONS

Fire Hazards from Smoking are a problem EVERYWHERE.

STOP FIRES BEFORE THEY START—with SIPCO DUNKING STATIONS.

Heavy duty CAST ALUMINUM canisters—guaranteed 3 years against breakage. Partly filled with water, they drown the "smoke". NO FIRE HAZARDS — NO ODORS — NO UNSANITARY CONDITION.

Lift off the canister, flip back the lid, dump it and the cleaning job is done.



Available in over a dozen different STANDARD and JUMBO SIZE models. Choice of black crinkle or bright polished DELUXE finishes to suit your particular requirements. NEAT, ATTRACTIVE — USED EVERYWHERE — OFFICES, CLUBS, LOUNGES, HOSPITALS, HOTELS, SHOPS, RESTAURANTS, INSTITUTIONS, SCHOOLS, ETC.

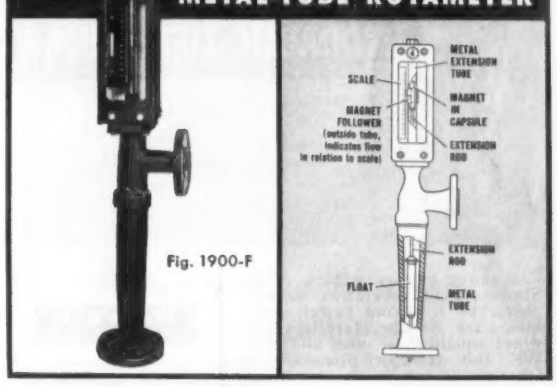
NEW MODEL 4J
Designed for permanent mounting on walls, posts, columns, etc. in public areas. Eliminates pilfering problem. JUMBO size canister furnished with light weight, rugged glass-fiber inner-liner. Flip back the lid—lift out the inner-liner and dump it. Inner-liner fits all JUMBO size SIPCO canisters and is available separately.

MODEL 1JD
JUMBO size DELUXE FLOOR MODEL. Heavy weighted base and attractive, eye catching sign. Height 42"—weight 26 lbs. Ideal for halls, aisles, landings, etc. Also available less sign (MODEL 1JWS). WRITE FOR ILLUSTRATED BROCHURE.

STANDARD INDUSTRIAL PRODUCTS CO.
DEPT. D • 3527 FARMINGTON RD. • PEORIA, ILLINOIS

▲ For more details circle NED-214 K8 on enclosed inquiry slip ▲

Measure Rate-of-Flow of
HARD-TO-HANDLE FLUIDS
with this SK
METAL-TUBE ROTAMETER



SK Metal-Tube (Armored) Rotameters are designed for measuring the rate-of-flow of hazardous fluids, high pressure fluids, and steam. Their accuracy, sound design, and sturdy construction make these instruments easy to apply and easy to use in direct and remote indicating, recording and controlling installations.

For additional data, write to SK for your copy of new Bulletin 19A.

Schutte and Koerting COMPANY
INSTRUMENT DIVISION
2227 STATE ROAD, CORNWELLS HEIGHTS, BUCKS COUNTY, PA.

▲ For more details circle NED-215 K8 on enclosed inquiry slip ▲

SHOVELS, SPADES, SCOOPS
WITH BLADES OF ALUMINUM, MOLYBDENUM ALLOY AND HIGH CARBON STEEL.

HEADQUARTERS
for industrial shovels, forks, wheelbarrows.

INDUSTRIAL GRADE FORKS, HOOKS, HOES, RAKES, FORGED STEEL HEADS.

BARROWS
ALL TYPES
MORTAR PANS, BOXES

Ask your industrial supply house, or write —

THE WOOD SHOVEL & TOOL CO.
PIQUA, OHIO

▲ For more details circle NED-216 K8 on enclosed inquiry slip ▲

Pallet Loads Move Easier with Weld-Bilt PALLET-TYPE HYDRAULIC LIFT TRUCKS

Easy-entry booster rollers, Multi-Stroke fast-lift operation, accelerator-type lowering pedal, Anti-kick-back Safety Handle, front wheel equalizer — these and other Weld-Bilt features promise long labor-saving service on your single or double pallet-moving operations. Check all the advantages — write for bulletin No. LT857-R.
For information on our complete line write us or our nearby representative.

"Weld-Bilt" PRODUCTS

Hydraulic Lift Tables and Trucks — Portable Elevators—Automatic Conveyor-lift Elevators — Conveyors — Skids — Special Equipment.

WEST BEND EQUIPMENT CORPORATION
MATERIALS HANDLING ENGINEERS
311 WATER STREET • WEST BEND, WISCONSIN

▲ For more details circle NED-220 K8 on enclosed inquiry slip ▲

up to 60% shorter than standard motors

NEW Louis Allis Pancake Motor

The new Louis Allis Pancake Motor is up to 60% shorter than other motors of its type. Actually, it's a conventionally-built—and consequently trouble-free—radial air-gap motor that's been compressed to less than half the length of many flange-mounted motors. The Pancake Motor couples space-saving design with top quality . . . maintains NEMA service factor.

The Pancake is ideal for machine tools, roof ventilators — any application where space is critical. Features include a rigid cast iron frame, pre-lubricated oversize bearings, and an insulating varnish that provides the highest degree of moisture, acid, and alkali resistance. Sizes from 1 to 15 hp, open or enclosed. Write The Louis Allis Company, 436 East Stewart Street, Milwaukee 1, Wisconsin.

SM-103

LOUIS ALLIS

▲ For more details circle NED-221 K8 on enclosed inquiry slip ▲

"We cut screw machine costs 52% with Lipe Automatic Magazine Loading BAR FEEDS"

*says Production Supervisor J. H. Lindsey**

COMMAND DECISION: "Cut costs to meet or beat competition."
STRATEGY: Try the Lipe A.M.L. Bar Feed. Shoot for 90% of gross geared screw machine capacity.
RESULT: In first week of bar feed operation, *146% more pieces than ever produced before!* A.M.L. fed stock *continuously*. No repeat motion for feed-outs. No changing of feed-fingers. No remnant disposal time. No cutting air.
COMMAND DECISION #2: *Every* screw machine to be A.M.L.-equipped, except those eliminated by production increase.

*Models and pseudonyms used to protect company identity and confidential information.

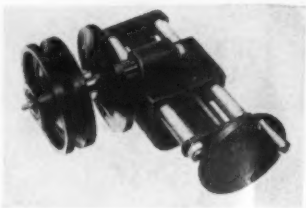
● WRITE OR WIRE for a FREE Lipe Sales Engineering estimate of production increases, savings and amortization time of Lipe A.M.L. Bar Feeds in your production layout.

Lipe-ROLLWAY CORPORATION

Manufacturers of Automotive Clutches and Machine Tools

▲ For more details circle NED-222 K8 on enclosed inquiry slip ▲

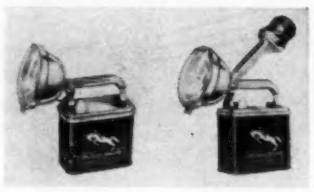
VARIABLE SPEED PULLEY gives small motor wide speed range



A few inches of countershaft adjustment on the Hi-Lo High Ratio pulley affords a complete range of driving speeds. Pulley is a double, variable pitch unit which automatically adjusts driver and driven sheave belt speed according to its distance from the motor. Moving countershaft toward the driver reduces driven speed, whereas movement away from driver increases driven speed. The fractional-to-½ hp unit has a 6:1 ratio with pulley distance varying from 1.875 to 4.60 in. The fractional-to-1 hp unit has 7.2:1 ratio with 2.4 to 6.50 in. pulley distance. Pulley faces are made of long-life plastic. Pulley assembly is needle bearing-mounted and handwheel adjusted. Distributed by **Lovejoy Flexible Coupling Co.**, 4941-H W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-223 K8 on enclosed inquiry slip ▲

EMERGENCY HAND LAMP portable and battery powered



Mounting directly on a standard 6-v twin-pack battery, Big Beam Mounty electric hand lamps are rated 40,000 cp. Model 664, right, has a sealed beam bulb and a two-position red flasher. Model 666, left, has the sealed beam white light only. These portable emergency and utility lamps sell for $9.95 and $7.50, respectively. Made by **U-C-Lite Mfg. Co.**, 1052 W. Hubbard St., Chicago 22, Ill.

▲ For more details circle NED-224 K8 on enclosed inquiry slip ▲

SHEET METAL NIBBLER cuts metals coated with pitch

All types of corrugated metals, even those coated with asbestos or pitch, can be cut with this Fenway Nibbler without clogging the machine. The portable unit operates on simple punch and die principle which leaves a finished, smooth edge. Punch is set well back in the nose block to prevent contact with operator's fingers. Nibbler is made in both air-powered and electric models and can be vise mounted for bench work. It weighs about 13 lb and is 10 in. long overall. The 1¼-hp motor delivers a 2-ton punch. Made by **Fenway Machine Co.**, Dept. D, 3107 N. Broad St., Philadelphia, Pa.

▲ For more details circle NED-225 K8 on enclosed inquiry slip ▲

USG® FRACTIONAL H. P. BRUSHES

THESE USG BRUSHES CAN HELP YOU OBTAIN MORE DEPENDABLE SMALL-MOTOR PERFORMANCE

If you manufacture fractional horsepower motors, it will pay you to install USG Brushes to get the most efficient operation from your product. USG Brushes are doing an efficient job for manufacturers of appliances, hand tools, fans, and similar units. To check your specifications with our materials, write for our new Catalog B-56 and the new USG Grade List . . . you'll find them a great help in designing.

221

THE UNITED STATES GRAPHITE COMPANY
DIVISION OF THE WICKES CORPORATION • SAGINAW 10, MICH.

▲ For more details circle NED-226 K8 on enclosed inquiry slip ▲

Specify the Best in Engraved Tools

The quality of your product deserves equal quality in your marking.
Our complete inventory of alloy steels permits instant selection to meet your requirements.
Style of lettering is tailored to your job.
Quotations furnished promptly upon request.

IF IT'S WORTH MAKING, IT'S WORTH MARKING.

GEO. T. SCHMIDT, INC.
1800 W. Belle Plaine Avenue
Chicago 13, Illinois

▲ For more details circle NED-227 K8 on enclosed inquiry slip ▲

runs up to 8,000 counts per minute!

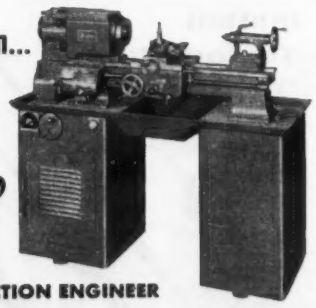
Here's a new Veeder-Root high-speed predetermining counter *with instant resetting*. Easily preset to the required number of pieces or performance-units, the counter subtracts to zero . . . *then resets with a finger-flick back to the original preset number.*

This new counter meets standard U. S. electrical requirements (JIC Codes) . . . and is available with either electrical switch or mechanical stop. Also available *without the predetermining feature*, as a high-speed reset revolution counter. *Write:*

EVERYONE CAN COUNT ON **Veeder-Root** INCORPORATED Hartford 2, Connecticut

▲ For more details circle NED-228 K8 on enclosed inquiry slip ▲

"When lathes jam... look out!"



SAID THE PRODUCTION ENGINEER

"Any man who specifies or influences the purchase of metal-working lathes knows that jamming of a lathe carriage or tool by an inexperienced operator can mean costly gear breakage and flying metal. But it *does* happen.

"What I didn't know was that *only* Logan Engineering makes 12" screw cutting and turret lathes with a *built-in* automatic safety gear as standard equipment. At the instant of overload the safety gear disengages, guarding against damage in the train of gears from spindle through gear box.

"This fine Logan 12" lathe—with 38 to 1400 rpm variable speed drive and no manual belt shifting—gives us 'built-in' insurance against heavy repairs and production slow-downs. And for a lower price!"

NOTE: These features are standard, too, on Logan 14" screw cutting models (variable speed range, 38 to 1400 rpm). On Logan 11", 10" and 9" lathes, automatic safety gear is optional.

LOOK AT A *Logan* BEFORE YOU LEAP

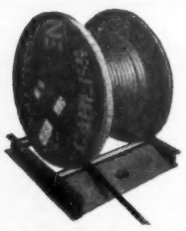
Catalog on request. Phone your Logan dealer or drop a line to—

LOGAN ENGINEERING CO.
Dept. Q-1058, 4901 Lawrence Avenue, Chicago 30, Illinois

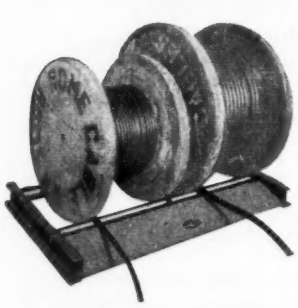
▲ For more details circle NED-229 K8 on enclosed inquiry slip ▲

▲ For more details circle NED-230 K8 on enclosed inquiry slip ▲

LOAD 'EM . . .
LET 'EM ROLL
HANDLE REELS
THE EASY WAY!



Easy, simple, efficient, time and labor-saving. Just load cable, wire or rope reels on Roll-A-Reel and let 'em roll on the ball-bearing adjustable rollers, on heavy steel frame.



Style "A" 2,000 lbs. cap. for reels up to 28 in. wide. (weight 60#)

PRICE — $46.50
F. O. B. Cincinnati

★ No jacks
★ Handle any reel diameter
★ Heavy steel frame
★ Slanted front
★ Ball-bearing adjustable rollers
★ Positive roller lock for unloading

Style "B" 4,000 lbs. cap. for 2 reels up to 24 in. wide each, or 1 reel up to 48 in. wide. (weight 110#)

PRICE — $84.50
F. O. B. Cincinnati

(Special sizes quoted on request)
Order today...or write for details

ROLL•A•REEL
4630 Reading Road
Cincinnati 29, Ohio

▲ For more details circle NED-231 K8 on enclosed inquiry slip ▲

Have You Considered the Important Advantages of FILLED TEFLON*?

Teflon can be considerably enhanced by the use of fillers in certain applications. The use of fillers permit it to be more readily tailored to a wide variety of chemical, electrical and mechanical applications. Also, some mechanical properties can be improved. These include:

1) resistance to deformation under load
2) resistance to wear
3) thermal conductivity
4) compressive strength
5) hardness

This is the reason filled Teflon has become an important item in the "John Crane" Chemlon® line of better Teflon products.

Chemlon is available with such fillers as glass fiber, carbon, graphite, copper and bronze, talc, calcium fluoride and other inorganic materials.

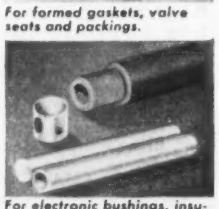
Request Bulletin T-104. Tell us about your requirements.

Crane Packing Company, 6411 Oakton Street, Morton Grove, Ill. (Chicago Suburb). *In Canada. Crane Packing Co., Ltd., Hamilton, Ont.*

*DuPont Trademark

For guide bushings, vanes and wear rings.

For formed gaskets, valve seats and packings.

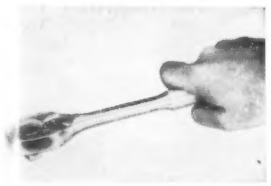


For electronic bushings, insulators and tuning slugs, also rod and tubing.

John Crane
MECHANICAL PACKINGS · SHAFT SEALS · TEFLON PRODUCTS · LAPPING MACHINES · THREAD COMPOUNDS
CRANE PACKING COMPANY

▲ For more details circle NED-232 K8 on enclosed inquiry slip ▲

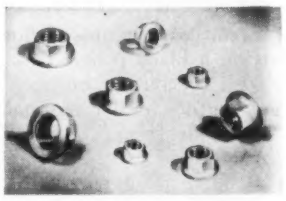
REVERSIBLE RATCHET drive end sizes are ¼ to ¾ in.



Compact, small heads; simple, visual, shift lever; and ease of field repair are features of line of reversible ratchet heads. Made of alloy steel, tools are heat treated for strength and wear. Drive end sizes are ¼, ⅜, ½, and ¾ in. Ratchet has 24 teeth, round knurled handle, and polished nickel-chrome finish. Made by **Owatonna Tool Co.**, 436 Cedar St., Owatonna, Minn.

▲ For more details circle NED-233 K8 on enclosed inquiry slip ▲

ALLOY STEEL NUTS from 11 to 72 per cent lighter

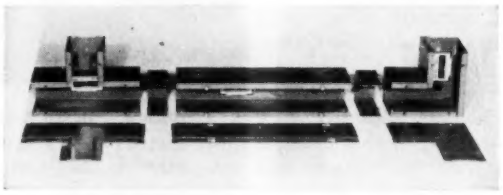


Featherweight FN - 12 forged alloy steel locknuts for structural skin and panel assemblies in aircraft and military electronics equipment are from 11 to 72 per cent lighter than sheet metal nuts they replace. Nuts are made with the minimum amount of metal needed to develop rated ultimate tensile strength of 125,000 psi. They can be installed with standard tools closer to perpendicular bulkheads than nuts now used. Nuts with external wrenching hexagonal drive are made in No. 4 to ⅜-in. sizes. They are available cadmium plated with or without molybdenum disulfide coating, and they meet or exceed all requirements of MIL-N-25027. Made by **Standard Pressed Steel Co.**, Box 581, Jenkintown, Pa.

▲ For more details circle NED-234 K8 on enclosed inquiry slip ▲

WIRING TROUGH in 1 to 5-ft lengths

Measuring 2½ x 2½ in. inside, wiring trough is available in 1, 2, 3, 4, and 5-ft lengths. End caps, 90-degree elbows, and T and U connectors comprise



available fittings. The ½-in. and ¾-in. concentric knockouts are on 3-in. centers, and on opposite sides of each other. Covers have keyhole slots and can be taken off without removing screws. Trough and fittings are finished in baked blue-gray enamel. Made by **Wadsworth Electric Mfg. Co.**, Dept. D-R, Covington, Ky.

▲ For more details circle NED-235 K8 on enclosed inquiry slip ▲

PORTABLE ELECTRIC OVENS...
GRIEVE-HENDRY
Standard Models For Every Special Need!

Model CR-1
10 cu. ft. capacity—30" wide x 25" deep x 24" high. Removable shelves and drip pan. . . . . $110.50 f.o.b. Chicago.

Portable. Costs less than 5c per hour to operate. Adjustable temperature control to 225° F. Fan driven forced air circulation. Uniform temperature throughout. Plugs into any 110V wall outlet—no special wiring required.

Quick Quotations —Prompt Delivery — Reasonable Prices—on Ovens made to your specifications.

Can be used in a group or bank. Use them on the production line —save handling—hauling.

Other standard models with temperature ranges to 1000°F. available. Write for literature.

GRIEVE-HENDRY CO., INC.
1408 W. Carroll Ave., Chicago 7, Ill.
Export Dept., 10406 S. Western Ave., Chicago 43, Illinois

▲ For more details circle NED-236 K8 on enclosed inquiry slip ▲

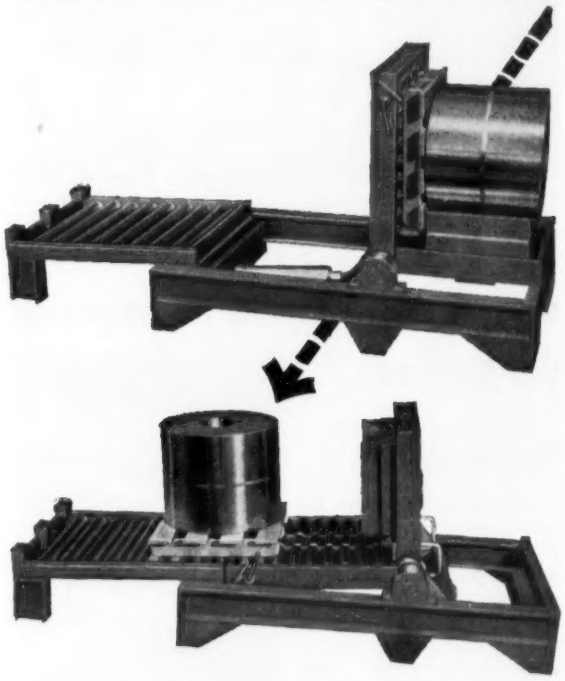
SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

Keeps drilling ¼" steel after other drills stall

Here's a drill that starts and finishes any maintenance or production job without slowing down. Actual comparative tests prove this SKIL Model 75 pierces ¼" steel in 1.26 seconds under 350 lb. pressure. Other drills stalled at 250 lbs. pressure. This superior performance comes from built-in power. Yet, it is compact and perfectly balanced. Weighs less than any other comparable ¼" drill. See your SKIL distributor for free demonstration.

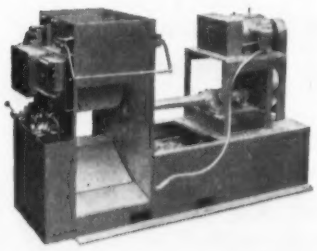
SKIL
Made only by SKIL Corporation, manufacturers of famous SKIL and SKILSAW products, 5033 N. Elston Ave., Chicago 30, Ill. In Canada: 3601 Dundas St. West, Toronto 9.

▲ For more details circle NED-237 K8 on enclosed inquiry slip ▲



Coil handling made easy with this portable self-contained tilter

Coils of steel, tinplate, brass, aluminum, and other metals are easily tilted from horizontal to upright or upright to horizontal position, with this portable coil tilter. Completely self-contained, it is hydraulically actuated from a single electric motor power source. It can be moved from one position to another in the plant by crane, and will handle coils weighing up to 20,000 lb, centering them on pallets up to 52 in. square. It will tilt a 20,000 lb coil in 20 seconds.



Slitting mill edge-trim and scrap wire are tightly balled and automatically ejected from this Salem-Brosius scrap baller.

SALEM-BROSIUS, INC.
16 Arch Street • Carnegie, Pa.
In Canada: Salem Engineering Limited • 1525 Bloor St. W., Toronto 9, Ontario

▲ For more details circle NED-238 K8 on enclosed inquiry slip ▲

Mr. Hi Frequency, the Electronic "Sleuth" Detects Unwanted Metal

THIS electronic sleuth stops the criminal destruction of quality by detecting stray metal particles in your process or production line. Magnetic or non-magnetic metal particles, no matter how deeply embedded, immediately trigger a warning or reject mechanism when they pass the compact Allis-Chalmers metal detector.

This device is economical to operate, permits conveyor speeds to 600 fpm, and is easily incorporated into any production setup. Ask your local A-C man for Bulletin 15B7217B, or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

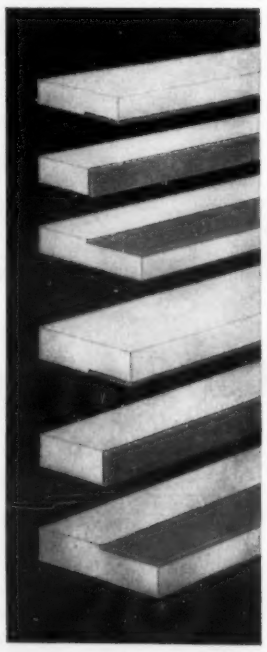
ALLIS-CHALMERS A-C A-5628

▲ For more details circle **NED-239 K8** on enclosed inquiry slip ▲

O-KNI-CO MACHINE TOOL **news**

PUBLISHED BY THE OHIO KNIFE CO., CINCINNATI, OHIO

Die Builders save up to 50% using new O-KNI-CO composite die sections



Six new sections now available

Companies building dies for both consumer and industrial products report O-KNI-CO ready-made die sections not only save up to 50% over the cost of home-made die sections, but offer many ways to improve die building. These savings are achieved because O-KNI-CO sections can be purchased at an established price. You buy what you need to your specifications. They are carried in stock in lengths up to 125". They are ready to use with cutting or forming edge hardened, machined and ground. Specially hardened tool steel (Rockwell 64-66) is bonded to a soft steel backing, quickly drilled for dowel or screw holes.

These six new sections make a total of seventeen O-KNI-CO sections now available to die builders. They can be used for cut-off, blanking, forming or flanging . . . draw and pinch dies, heels, back-up plates or as guides and hold-down gibs.

Use coupon below for Data Sheets illustrating the varied applications of O-KNI-CO composition die sections.

◀ **Typical Draw Pinch Trim die applications using O-KNI-CO composite die sections.**

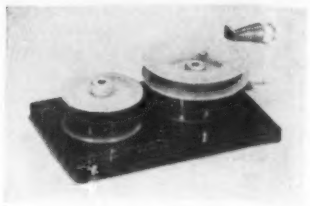
FREE THE OHIO KNIFE CO. Dept. H
Cincinnati 23, Ohio

Gentlemen: Please send me FREE Data Sheet on O-KNI-CO composite die sections.

NAME_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

▲ For more details circle **NED-240 K8** on enclosed inquiry slip ▲

SPRING MOTORS develop 1 and 2-lb tension on cable throughout the 6-ft extension

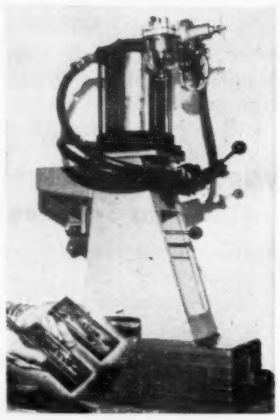


Intended to aid design engineers in developing mechanisms, Neg'ator constant-torque B spring motors are also applicable for providing light tension forces through long deflections. Both have standard bases. Model A-2025-1 exerts a 1-lb tension on the stainless steel output cable throughout its 6-ft extension. Model A-2025-2 exerts a 2-lb tension throughout the same cable extension. The cable extension lengths can be increased to a maximum of 10 ft 5 in. and 9 ft 7 in., respectively. Greater torques are obtainable by using a different spring motor.

Each model consists of a constant-torque spring wound on nylon motor drums on a black plastic base. The cable pulley is integral with the output bushing. A looped terminal attachment permits either manual or mechanical extension of the cable from a stop on the base. Motors are priced $8 each. Made by **Hunter Spring Co.**, Neg'ator Div., Dept. NED, 1 Spring Ave., Lansdale, Pa.

▲ For more details circle **NED-241 K8** on enclosed inquiry slip ▲

PLASTIC INJECTION MOLDER compact bench models handle all thermoplastics, including nylon



Unlimited varieties of plastic items, from full 1-oz units utilizing maximum mold casting area of 6 sq in. down to intricate subminiatures, can be produced on Wasp Models 35 and 45 bench-type Mini-Jector plastic injection molders. They handle all thermoplastics, including nylon. Capacities range up to several hundred pieces per hour, depending on the number of cavities per mold.

Machines feature simple, V-block, parting-line sprued molds and automatic mold ejection per cycle. Interchangeable cavity cells are optional. Both models afford similar advantages for precision insert molding around wires and cords, and for encapsulating. Units are available for air or hydraulic power, with up to 30,000 psi rating on the latter, and have lever, pushbutton, or automatic controls. Model 45 is pictured. Made by **Newbury Industries, Inc.**, Box 24ED, Newbury, Ohio.

▲ For more details circle **NED-242 K8** on enclosed inquiry slip ▲

CONOFLOW PRESSURE and LIQUID LEVEL TRANSMITTER

The Conoflow Model "P" Transmitter is a rugged instrument capable of measuring pressure or liquid level, and transmitting a *linear* 3-15 psi signal to a suitable recorder. No dip tubes, floats, or other mechanical devices are required inside the tank. Can be used for many services, on either open or closed vessels. Ideal for viscous fluids or materials which solidify in the static lines of pressure elements of conventional transmitters.

Available for measuring ranges from as low as 0 to 100" of water or pressures as high as 250 psi. Utilizes a corrosion-resistant Inconel X diaphragm suitable for temperatures to 450° F. Measured material cannot penetrate air lines. Safety shut-off feature available. Ranges easily changed in the field.

Conoflow Controls FOREMOST IN FINAL CONTROL ELEMENTS

Write for Bulletin P-2520-3, today. CC714

CONOFLOW CORPORATION
SUBSIDIARY OF WALWORTH COMPANY
2100 ARCH STREET • PHILADELPHIA 3, PA.

▲ For more details circle **NED-243 K8** on enclosed inquiry slip ▲

TAKE GUESSWORK OUT of DEW POINT READING with Alnor® DEWPOINTER

Any shop man can quickly...accurately...read dew points with the Dewpointer. It is the only instrument that lets you see the fog in a sealed chamber under controlled conditions. Compare this fast, positive method with attempts made to tell exactly when fog forms on a mirrored surface. Completely self-contained, requires no external coolant or auxiliary apparatus ...operates on enclosed battery or AC. Available in three ranges for dew points between −20° F. and room temperature, from −80° to 0° F. and −80° F. to room temperature.

Send for Dewpointer bulletin. Tear out this ad and send on your letterhead to: Illinois Testing Laboratories, Inc., Room 529, 420 N. LaSalle St., Chicago 10, Ill.

Alnor **PRECISION INSTRUMENTS FOR EVERY INDUSTRY**

▲ For more details circle **NED-244 K8** on enclosed inquiry slip ▲

Saw Large Holes thru sheet or plate

MARVEL High-Speed-Edge Hole Saws (with high-speed-steel cutting edge integrally welded to tough alloy steel body) provide fast, economical means of sawing out holes from 9/16" to 6" diameter through steel up to 1⅛" thickness. Extra cutting quality and high-speed-steel, self-aligning, double drive pin arbors give strength for use on drill presses, lathes and portable tools, greatly increase the hole size capacity of small tools. Last longer and cut faster with safety.

Write for Hole Saw Catalog Sheets.

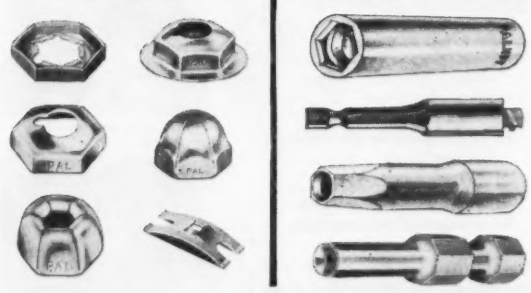
MARVEL Metal Cutting SAWS — Better Machines-Better Blades

ARMSTRONG-BLUM MFG. CO.
"The Hack Saw People"
5700 Bloomingdale Ave. Chicago 39, U.S.A.

▲ For more details circle **NED-245 K8** on enclosed inquiry slip ▲

High-speed Assembly Method!

PALNUT LOCK NUTS PLUS PALNUT SOCKET WRENCHES



RESULT: Vibration-proof assemblies, with big savings in assembly time and cost

Specially-designed PALNUT magnetized socket wrenches and shanks for all standard power and manual tools, permit picking up, starting and tightening in one high speed operation. No fumbling with hand starting. Fast, uniform tightening.

WRITE FOR CATALOG and folder showing PALNUT assembly methods

THE PALNUT CO.
Subsidiary of United-Carr Fastener Corporation
45 Glen Road, Mountainside, N. J.
In Canada: P.L. Robertson Co., Ltd., Milton, Ont.

PALNUT TRADEMARK LOCK NUTS

▲ For more details circle **NED-246 K8** on enclosed inquiry slip ▲

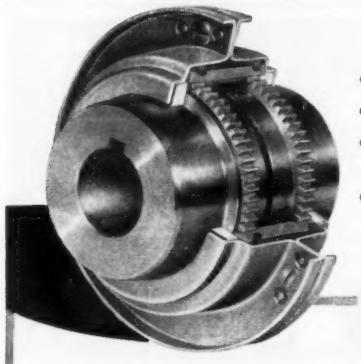
If you need a NEUTRAL PAPER, find out about

MOSINEE Seven-0

for complete information write

MOSINEE PAPER MILLS COMPANY
Mosinee, Wisconsin

For more details circle NED-247 K8 on enclosed inquiry slip



- New, low price
- Easy assembly
- Protection against misalignment
- Light-weight, all-metal design

NEW!

LINK-BELT geared flexible MOTOR COUPLINGS

Here's a new, flexible coupling at a new, low price . . . *geared* to make it practical on small electric motor applications. All-metal design assures high capacity and durability. Protects machinery against the harmful effects of shaft misalignment. Available from stock for shafts up to 1⅞" from Link-Belt factory branch stores and authorized stock-carrying distributors. 14,951

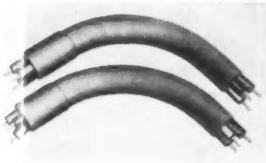
LINK-BELT GEARED FLEXIBLE COUPLINGS

Send for Folder 2875 . . . complete selection and features data

LINK-BELT COMPANY: Prudential Plaza, Chicago 1, Ill.

For more details circle NED-248 K8 on enclosed inquiry slip

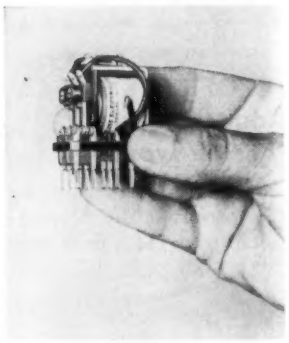
SEMIRIGID PVC CONDUIT can be worked into contours



With inside diameters made to UL conduit specifications, semirigid polyvinyl chloride electrical conduit can be used for all power and communications wire installations. Conduit can be easily worked into contours and cut with a hacksaw. Sections are chemically welded together with appropriate cement. Conduit is waterproof, cannot corrode and will not support combustion. Made by **Kraloy Plastic Pipe Co.**, Dept. NED-98, 4720 E. Washington Blvd., Los Angeles 22, Calif.

For more details circle NED-250 K8 on enclosed inquiry slip

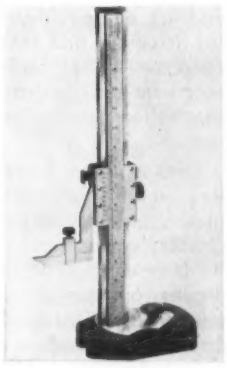
PRINTED CIRCUIT RELAY rated 5 or 10 amp at 115 v ac



Silver or silver cadmium oxide contacts of the Series MKT printed circuit relay are gold-flashed to eliminate oxidation during storage and use. Units are thus suitable for low power level control in arrangements up to three-pole double-throw. Contacts are rated 5 or 10 amp resistive at 115 v ac, or 26.5 v dc. Coils are available in all standard alternating and direct-current voltages and 2500, 5000, and 10,000 ohm resistance values for plate circuit use. Made by **Line Electric Co.**, 14th Avenue & Sixth Street, Newark 3, N. J.

For more details circle NED-251 K8 on enclosed inquiry slip

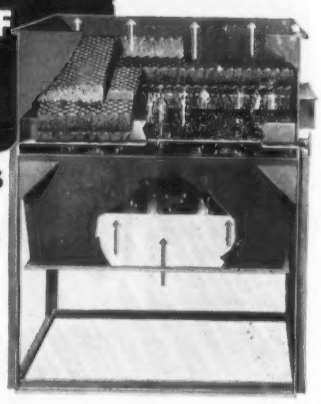
VERNIER HEIGHT GAGE in 12, 18, and 24-in. sizes



A 50-division, flush-fitting vernier; full length slide adjustment with screw release; vibrationproof design with natural grip base; and hardened and stabilized master bar are features of the 254 Master vernier height gage. Flush fitting the vernier scale to the main scale so that both are on the same plane, eliminates reading errors caused by parallax. Slide is set with a fine adjustment knob on the base. Recess in base allows measuring from base surface without calculations. Graduated surfaces have nonglare satin chrome finish. Made by **L. S. Starrett Co.**, Dept. ED, Athol, Mass.

For more details circle NED-252 K8 on enclosed inquiry slip

NEW AAF Type M CYCOIL



COLLECTS MISTS and VAPORS ECONOMICALLY

Why put up with polluted air from plating tanks and other vapor-discharging industrial processes? AAF's new Type M CYCOIL costs less, is more efficient, takes up less space, and weighs less than conventional wet collectors used for this application.

Exhaust air or gas is scrubbed by thousands of flooded contact surfaces in the fluid bed pad. No liquid retention, no recirculating pumps, no heavy scrubbing or eliminator section required. Normal water supply, only 3 quarts per hour per 1000 cfm.

Available in 7 sizes, from 1,200 to 24,500 cfm. Write for Type M CYCOIL Bulletin 286.

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-253 K8 on enclosed inquiry slip

They cut damage from soilage by 20%

Dust and dirt are constant threats in stores, factories and homes alike. And in this big New York store it meant all-too-rapid soilage in the white goods department. In fact, the recurring loss was so great that they decided to replace over 300 ordinary filters with PLIOTRON super-filters.

Results: *Their loss due to soilage of white goods was cut by 20%.* The super-filters remained effective longer. And, when dirty, a quick water rinse restored full filter-power.

For PLIOTRON super-filters are much more than mechanical screens. Depth-loaders—not mere surface-loaders—they capture up to 5 times as many of those fine, hardest-to-catch dirt particles. And fully washable, they're reusable indefinitely.

PLIOTRON super-filters fit standard holders in almost any forced air-heating or air-conditioning system. They're becoming first choice in business and industry the country over. Call your PLIOTRON Distributor—or write Goodyear, P.O. Box 288, Akron, Ohio.

for cleaner air everywhere—

PLIOTRON AIR FILTER BY GOODYEAR
THE GREATEST NAME IN RUBBER

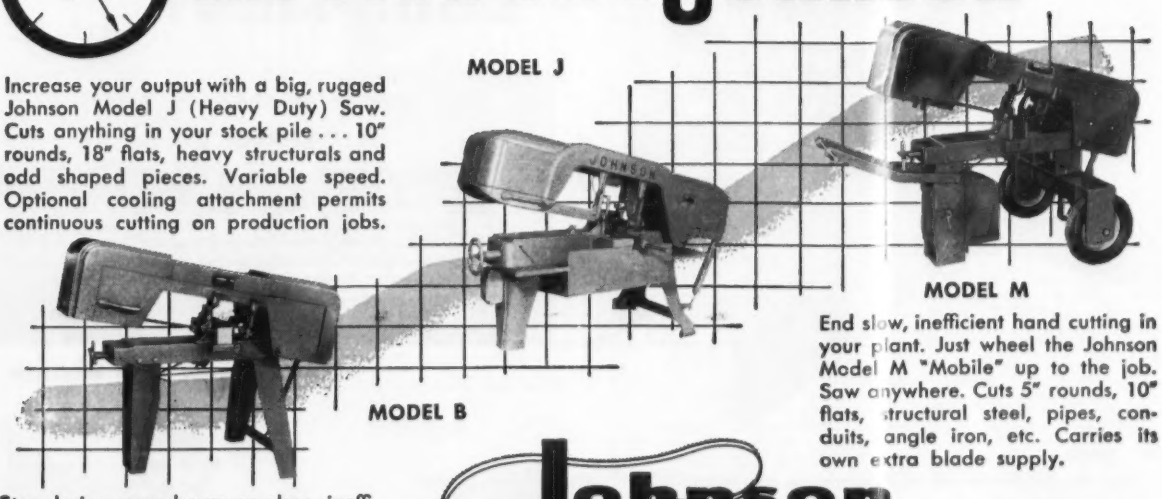
Pliotron—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-254 K8 on enclosed inquiry slip

Time Study your Metal Cutting... and You'll Get a Johnson

MODEL J

Increase your output with a big, rugged Johnson Model J (Heavy Duty) Saw. Cuts anything in your stock pile . . . 10" rounds, 18" flats, heavy structurals and odd shaped pieces. Variable speed. Optional cooling attachment permits continuous cutting on production jobs.



MODEL M

End slow, inefficient hand cutting in your plant. Just wheel the Johnson Model M "Mobile" up to the job. Saw anywhere. Cuts 5" rounds, 10" flats, structural steel, pipes, conduits, angle iron, etc. Carries its own extra blade supply.

MODEL B

Stop losing man hours on slow, inefficient metal cutting machines. Specify a Johnson Model B (wet or dry) Saw for top production. Variable speed. Saws 5" rounds, 10" flats, odd and irregular shapes too. Can be caster equipped for portability.

Johnson MANUFACTURING CORPORATION
Barnes & Taylor Sts. • Albion, Michigan

Eastern Distributor
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W. Q. LUNDMARK
75 N. Broadway
Des Plaines, Illinois

Western Distributor
HASTING DISTRIBUTORS
1605 Solano Avenue
Berkeley, California

For more details circle NED-249 K8 on enclosed inquiry slip

Continuous Threaded
STEEL ROD
BY SINTZ
It Bends Cold

Sintz crt* threaded rod gives you these important time-money saving features.

• Quality—Made from #1010 CISI cold rolled steel • Smoother, More Uniform Threads • Greater Strength • Low Cost.

Try SINTZ once and you'll be convinced.

*Cold Rolled Threaded—Bends Cold

ORDER FROM YOUR MILL SUPPLY HOUSE—INDUSTRIAL JOBBER OR DIRECT FROM . . .

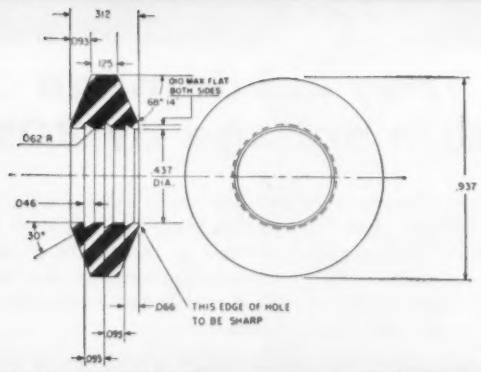
CLAUDE SINTZ INC.
1928 STANLEY AVENUE
DETROIT 8, MICHIGAN

STUDS • FORMED RODS • PIPE PLUGS

For more details circle NED-255 K8 on enclosed inquiry slip

NOW! 100,000 molded-rubber parts like these daily!

NOW! Tolerances of ±0.005" in large volume production!



NOW! Precision-molded parts in volume without premium price!

Functional parts molded from rubber or synthetic rubber—up to 1¼" in diameter and 1" in thickness—requiring close control, can now be produced in large volume at significant savings in cost, thanks to the first fully-automated molding process now in use at Ohio Rubber.

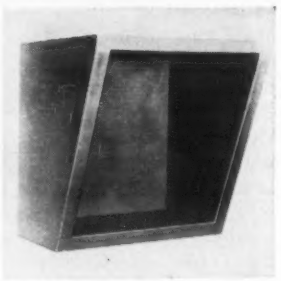
Precision parts such as shock absorber seals, engine valve stem deflectors, electric condenser caps and aerosol container valves, all formerly produced on a costly small-volume basis because of the high degree of dimensional accuracy and compound control involved, can now be produced with equal or greater accuracy and control in large volume—and at substantially lower cost.

FOR MORE INFORMATION check with ORCO engineers on your very next rubber or rubber-like small component part requirement. Complete details of your specifications and requirements—part drawing and sample, application of part, annual usage—will enable them to give you the quick, cost-saving story.

ORCO THE OHIO RUBBER COMPANY
WILLOUGHBY, OHIO
A DIVISION OF THE EAGLE-PICHER COMPANY

For more details circle NED-256 K8 on enclosed inquiry slip

ACOUSTICAL PHONE BOOTH cuts noise level 50 per cent

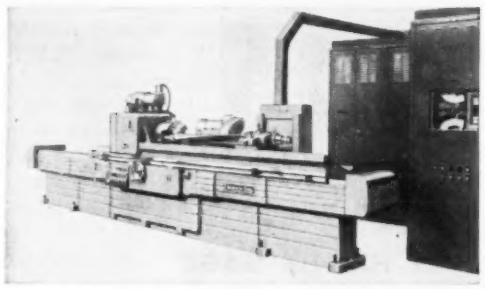


This acoustically conditioned intercom or telephone booth will cut unwanted sound levels by as much as 50 per cent in noisy plant areas to allow clear, correct reception of telephone messages. The steel constructed A-12 Shop Booth has a perforated steel interior placed over sound absorbing material which is built into the walls and top. The walls and top are 2 in. thick. Booth is finished in a double coat of gray hammerloid enamel. It measures 28 in. wide, 30 in. high, and 23 in. deep at the top. Bottom writing shelf is 15 in. deep. Price is $77.50. Made by **Suttle Equipment Co.**, Suite 618, 135 S. LaSalle St., Chicago 3, Ill.

For more details circle NED-257 K8 on enclosed inquiry slip

TAPE CONTROLLED PROFILERS machine in three dimensions around the axis of the work

Numerically controlled three-dimensional machining around the axis of the work is performed by Numeri-Trol profiling machines. Such parts as cams, tem-



plates, and airfoil contours of steam turbine buckets and jet engine blades can be produced. Parts having irregular and twisted forms are machined without cams or special tooling. One model operates on a magnetic tape system and electric servo motors, while the other uses punched tape and hydraulic servo motors.

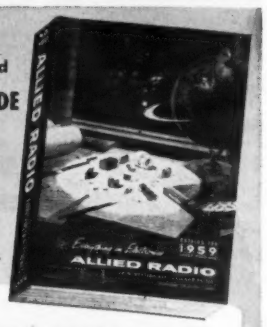
One machine handles turbine buckets up to 60 in. long and 11 in. wide; the other produces cams, templates, and jet engine blades. In the grinding assembly, consisting of precision grinding spindle with its drive equipment and hydraulic swivel type diamond dresser, position of wheel in relation to work is maintained regardless of dressing operation. The amount dressed off the wheel is compensated for automatically.

Cast base is well ribbed for rigidity, and leveling pads and jack screws afford perfect leveling and alignment of the base on the foundation. Made by **Ex-Cell-O Corp.**, 1216 Oakman Blvd., Detroit 32, Mich.

For more details circle NED-258 K8 on enclosed inquiry slip

Free send for the most widely used ELECTRONIC SUPPLY GUIDE

ALLIED'S COMPLETE 452-PAGE 1959 CATALOG



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For more details circle NED-260 K8 on enclosed inquiry slip

DRILL-REAM
COUNTERSINK
COUNTERBORE
DO ALL FOUR
on the same drill press with
quadrill

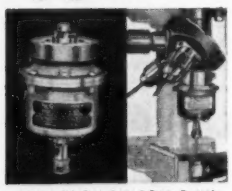
FOUR POSITION DRILLING & TAPPING TURRET HEAD

FITS ALMOST ANY DRILL PRESS

No need to set up for each operation. A simple rotation of this turret head brings any of four drills or cutting tools into position. Speeds production—cuts cost! Specify size and make of drill press when ordering QUADRILL.

For Fast Accurate Tapping Operations
use the quadtapper

You get precision tapping at high speed by simply attaching the QUADTAPPER to any of the four spindles of the QUADRILL. Write today for complete information on both these production tools.

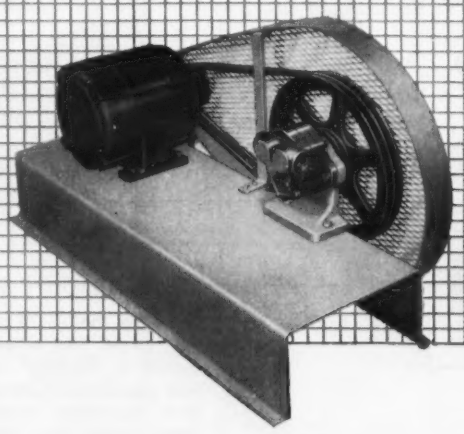


FOR USE ON QUADRILL ONLY

CHICAGO QUADRILL *Company*
1856 BUSSE HIGHWAY • DES PLAINES, ILL.

For more details circle NED-261 K8 on enclosed inquiry slip

from Webster... NEW SUPPLY PUMP EQUIPMENT



to handle no. 5 and 6 furnace oils

Webster direct drive units are motor driven at 900 rpm optimum speed — relatively low speed lengthens pump life. Capacities and pressures of belt driven sets can be varied to meet specific requirements by changing size of pulleys.

call the man from Webster

Now the efficiency and high operating performance of Webster supply pumps are available for commercial and industrial applications requiring the handling of heavy oils. The new Webster heavy oil pumps are built in either direct drive or belt drive units with motors ranging from ¼ h.p. to 2 h.p. Plenty of capacity, too . . . from 28 to 575 gph, with pressures up to 300 psi. Extra large ports mean initially cold, heavy oils can be handled without restrictions.

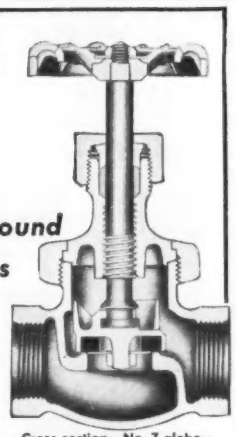
New Webster pumps are compact, easy to install — require less plumbing. Write for additional information.

HEATING DIVISION
WEBSTER ELECTRIC
RACINE · WIS

For more details circle NED-259 K8 on enclosed inquiry slip

Easy-to-repair brass valves CRANE

Composition disc—150-pound
Globes • Angles • Checks



Cross section—No. 7 globe—screwed ends

- Interchangeable disc-holder feature cuts down time to minutes.
- Handle 7 services with only 2 types of composition disc—steam, hot water, cold water, gas, air, oil, gasoline.
- Can be repacked under pressure when wide open.
- Sizes: globe, angle—⅛ to 3 in.; lift check, ¼ to 3 in. Screwed or flanged ends.

Replacing preassembled disc and holder

For complete information, get Circular AD-2222 from Crane Representative or write to address below.

CRANE VALVES & FITTINGS
PIPE • PLUMBING • KITCHENS • HEATING • AIR CONDITIONING
Since 1855—Crane Co., General Offices: Chicago 5, Ill.
Branches and Wholesalers Serving All Areas

▲ For more details circle NED-262 K8 on enclosed inquiry slip ▲

NOW! SOLVE THAT LOW DOCK PROBLEM *Economically*
NEW HI-LO AUTOMATIC DOCKBOARD

Model 1208; 8' long by 6' wide. Model 1210; 10' long by 6' wide.

SAVES TIME Backing truck automatically adjusts long, wide ramp surface . . . speeds loading. Does away with labor-wasting placement and storage of loose plates.

SAVES EXPENSE The HI-LO is simply lagged to top of present dock. Can't be lost, stolen, or damaged. Simple counterbalance system. No hydraulics, motors, or controls.

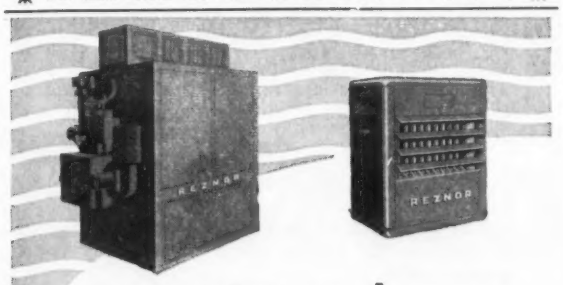
IMPROVES SAFETY No more loose plate hazards. No lifting or straining. The HI-LO is a permanent part of the dock . . . cannot slip out of position.

HI-LO Automatic DOCKBOARDS

WRITE FOR COMPLETE LITERATURE

KELLEY COMPANY, INC.
2125-A W. Mill Road
Milwaukee 9, Wisconsin

▲ For more details circle NED-263 K8 on enclosed inquiry slip ▲



stop moisture damage

Rust, mold and other types of moisture damage can be a real problem at both ends of your production line . . . destroying stockpiles of raw materials or attacking warehouse stocks of your finished product. Reznor gas unit heaters put a stop to such losses.

You can install Reznor gas unit heaters in your warehouse and storage buildings, set the thermostat and forget them. These completely automatic units, operating without any attention, will hold the temperature at any point you select. If rust or mold is a problem in your plant, ask your Reznor distributor for specific recommendations on how to stop it. For complete details on Reznor equipment for solving any plant heating problem, write for your free copy of "Modern Heating".

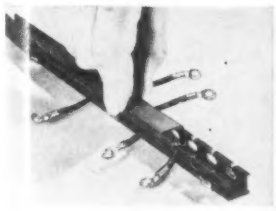
Look for Reznor under "Heaters-Unit" in the Yellow Pages

REZNOR
WORLD'S LARGEST-SELLING DIRECT-FIRED UNIT HEATERS

Reznor Manufacturing Company, 41 Union Street, Mercer, Pa.

▲ For more details circle NED-264 K8 on enclosed inquiry slip ▲

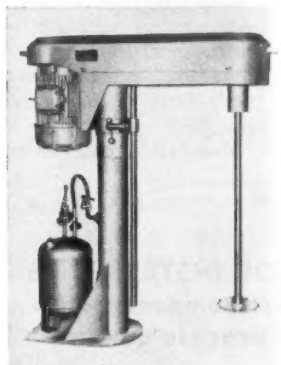
SMALL WIRING DUCT for miniature electronic equipment



Available in a complete range of cross-sections, this miniature wiring duct has snap-in slot design which allows wire to be laid after terminals have been attached. Slots are separated by flexible plastic fingers which bend to admit wires. Cover snaps on quickly. Duct is made of nonflammable vinyl plastic, can be cut with saw at any angle, and is easily mounted on equipment with snap type spring clip or screws through the base. Made by **Panduit Corp.**, Dept. NDC, 14461 Waverly Ave., Midlothian, Ill.

▲ For more details circle NED-265 K8 on enclosed inquiry slip ▲

LIQUID BATCH MIXER capacity ranges from 50 to 200 gal



Ultimate dispersion, dissolving, emulsifying, and deagglomerating are performed by this 50 to 200-gal capacity Cowles Dissolver in processing solid-liquid, liquid - liquid, or gas-liquid mixtures of up to 50,000 centipoises. Model 510-VH occupies only 7 sq ft of floor space, and is powered by 7½, 10, or 15-hp motor. Impeller will center in up to 48-in. diameter tanks. Shaft speeds of 890 to 2040 rpm are obtained by interchangeable sheaves on the V-belt drive. Bridge swings in a 180-degree arc and can be locked in any lateral position or height. Made by **Morehouse-Cowles, Inc.**, 1150-A San Fernando Rd., Los Angeles 65, Calif.

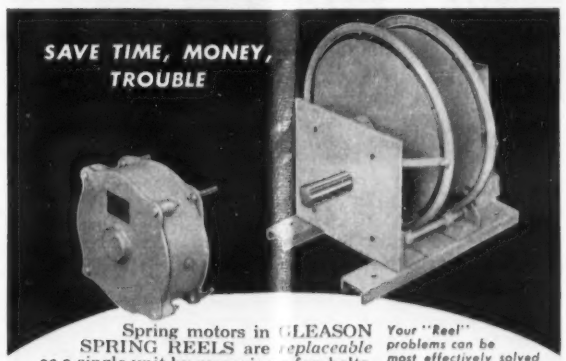
▲ For more details circle NED-266 K8 on enclosed inquiry slip ▲

INSERT NUT for fastening in fragile materials

Four legs which penetrate the wall of the installation hole on two different levels provide this insert nut with maximum holding strength in wood, plastics, and other fragile base materials. The lightweight, one-piece nut for secondary structural applications is stamped from heat treated spring steel and is internally threaded. Its self-locking construction permits removal and re-use. Sizes for No. 6, 8, and 10 screws are available. Made by **Illinois Tool Works**, Calinoy Div., 12917 Cerise Ave., Hawthorne, Calif.

▲ For more details circle NED-267 K8 on enclosed inquiry slip ▲

REPLACEABLE Spring Motors in Gleason Reels



Spring motors in GLEASON SPRING REELS are *replaceable* as a single unit by removing a few bolts. There's no chance of spring "fly out," no need to handle loose or free springs. A stock of these spring motors is always on hand, for quick replacement without difficulty or danger.

Check into this—and many other features, that make GLEASON REELS the safest, most efficient, most economical for all cable-control applications to "equipment in motion."

Your "Reel" problems can be most effectively solved by GLEASON REELS. Write for a Gleason-engineered suggestion — or free copy of Bulletin C-1256.

Gleason Reel Corp
738 N. PLANKINTON AVENUE
MILWAUKEE 3, WISCONSIN
SPRING REEL HEADQUARTERS FOR ALL INDUSTRY

▲ For more details circle NED-268 K8 on enclosed inquiry slip ▲

TYGON GASKETS *Resist* CHEMICAL ATTACK

Tygon plastic is tops for gasketing in acid handling service. Tough, flexible, highly resistant to acids and alkalies. Available in sheets, tubes or solid cord from which you can cut your own gaskets quickly and inexpensively. 65E

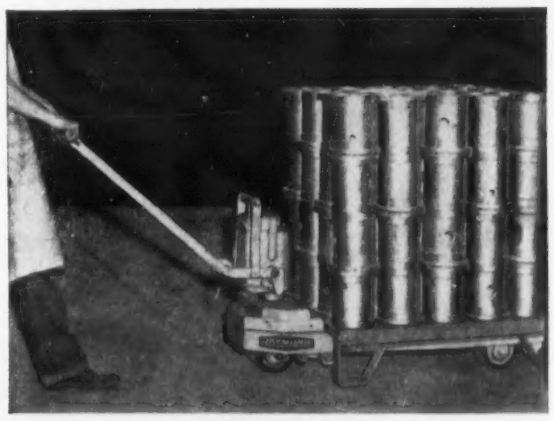
Plastics and Synthetics Division
U. S. STONEWARE
Akron 9, Ohio

WRITE *for* BULLETIN G-520

▲ For more details circle NED-269 K8 on enclosed inquiry slip ▲

2 COST CUTTERS for plant or warehouse!

LIGHTWEIGHT PALLET TRUCK
Extremely light in weight. Easy rolling. 270° steering radius. Lifts and lowers the load hydraulically. Ruggedly built. Available in 2,000 and 3,000 lb. models.



SKID TRUCK
Sturdiest skid truck made! 360° turning radius for close-quarter steering, plus fingertip lowering. 3 cap.: 2,500; 4,000 or 6,000 lbs.

RAYMOND

The RAYMOND CORPORATION
4171 Madison St., Greene, N. Y.

FREE BULLETINS!
☐ Lightweight pallet truck
☐ Skid truck

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-270 K8 on enclosed inquiry slip ▲

Rigid vinyl extruded profiles offer excellent physical and electrical properties, plus outstanding corrosion-resistance and weatherability. As electrical insulators, bus duct covers, interior and exterior architectural trim, slides, window track, or as varied structural units, Vin-Con rigid vinyls offer material and cost advantages. Dies are inexpensive, the end product often less costly than metal.

Write for full information and technical data.

Dept. NED 1058

CONNEAUT
RUBBER and PLASTICS CO.
CONNEAUT, OHIO 1579A

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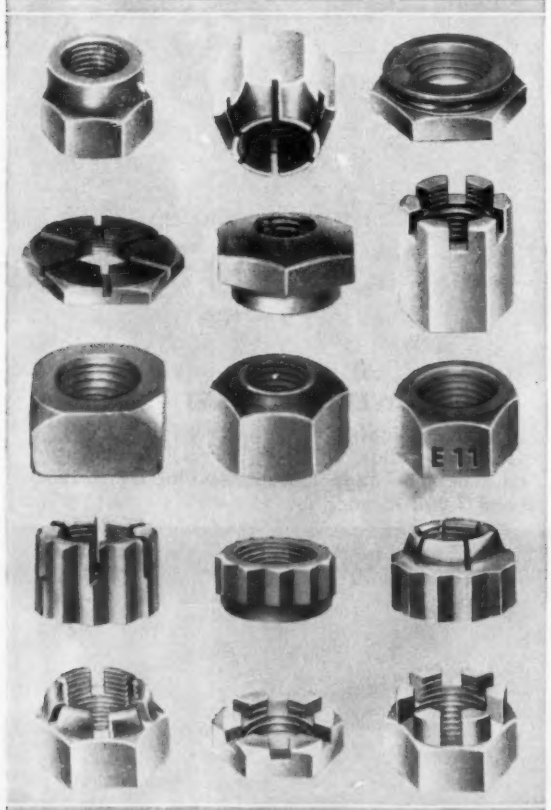
SPECIAL NUTS

to specs. 7/16"—4¼" cross flats

4 special machines + large stock of material × years of experience = speedy deliveries high quality low prices



Here are a few samples made to customers specifications . . Our batteries of special high-speed multi-spindle, automatic machines make possible fast and accurate production of hexagon nuts of non-standard height and special shape from carbon or alloy steel, Naval bronze or other non-ferrous metals; also AN 310 through AN 335 as per latest Airforce specifications. Very often the special nut you require may be similar to one we are already making and a simple modification would result in a price advantage and quicker deliveries to you . . Send us your blueprint and particulars —let us quote on your requirements . . We also have a catalog that contains complete specifications, engineering data and prices regarding our standard nuts.

*12 Pointer Standards, sizes: ¼" to ¾"—brochure on request

NATIONAL MACHINE PRODUCTS

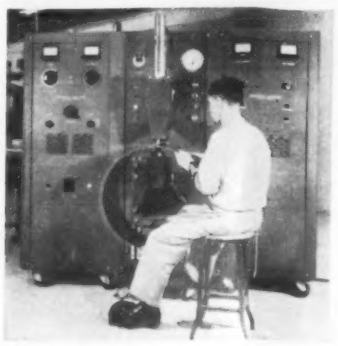
*Manufacturer of Standard and Special *12 Pointer and Hexagon Nuts . . . "Huglock" and "Marsden" locknuts.*

44225 Utica Rd., UTICA, Michigan

SPS/COMPANY

▲ For more details circle NED-273 K8 on enclosed inquiry slip ▲

2000-W ULTRASONIC WELDER joins most metals without fusion

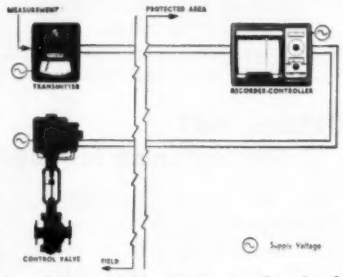


Adaptable for production applications, Model W-2000-SR-57-10 Sonoweld ultrasonic welder will join similar and dissimilar metals without fusion, and with minimum of external deformation. This semiportable unit has a box-beam frame and a hydraulic force system. The transducer coupling assembly is powered by a heavy duty generator housed in two cabinets. Machine operates on 230 v ac and consumes a maximum of 3.5 kva, even when joining 0.05-in. 1100 aluminum sheet. Work is merely placed between the two welding members or sonotrodes. A foot switch initiates the automatic welding cycle. Machine is particularly suited for joining extremely thin metals which are difficult to handle by conventional welding methods. Most metals can be bonded with little or no prior cleaning. Made by Aeroprojects, Inc. and marketed by **Sonobond** Corp., 314 E. Rosedale Ave., West Chester, Pa.

▲ For more details circle NED-274 K8 on enclosed inquiry slip ▲

ELECTRONIC CONTROL INSTRUMENTS line provides latest components for every function in process control

Advanced design transmitters, recorders, controllers, and valve operators, covering every function in the process control loop, comprise the Electronic Consotrol Instrumentation line. Typical pressure, flow, and level measurements are converted at the transmitters to proportional current signals and transmitted over unshielded lines to a control center. Converters for electromotive force and resistance also feed signals to the panel-mounted receivers.



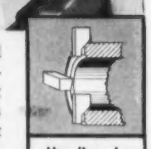
In addition to magnetic amplifiers and transistors, instrumentation features choice of motion balance or force balance transmitters, tubeless electrical measurement converters, a new approach to control station design, and diversified installation arrangements using standard system components. Other features include direct-current transmission, a current system unaffected by changes in line or load resistance, pull-out construction for inspection or replacement of key subassemblies, and optional explosionproofing. Announced by **Foxboro Co.**, 26 Neponset Ave., Foxboro, Mass.

▲ For more details circle NED-275 K8 on enclosed inquiry slip ▲

saves time cuts costs ON TUBE AND ROD

✓ DEBURRING
✓ CHAMFERING
✓ FACING, POINTING

Here is the machine that eliminates the need for tying up expensive lathes and screw machines for deburring rods and tubes, and it profitably replaces such costly methods as hand rolling pieces against a sanding belt or holding them against a rotating brush. The Pines End-Finishing Machine is *fast* and *accurate*. It squares the end, removes all the burr from the inside, and makes a uniform, accurate chamfer on the outside. Women operators commonly deburr up to 800 1-inch tubes per hour. It clamps, feeds, finishes in one motion — leaves one hand free for stock handling. Machine illustrated handles stock up to 2" O.D. Automatic air-clamping units and models for stock up to 5" also available.



Handles deburring, chamfering, facing operations simultaneously.

FREE BULLETIN
Find out how these machines save space and cut costs on wide range of work.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery
641 WALNUT • AURORA, ILLINOIS
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

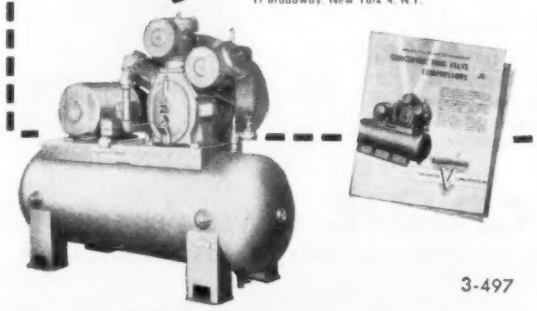
▲ For more details circle NED-276 K8 on enclosed inquiry slip ▲

write for new catalogs

New catalogs show the features and performance data of the Ingersoll-Rand Type 30 Compressors and Vacuum Pumps—from ½ to 20 hp—send for your copies today and find out more about

- Balanced V Construction
- I-R Tested Valves
- Foolproof Unloading

Ingersoll-Rand
11 Broadway, New York 4, N.Y.

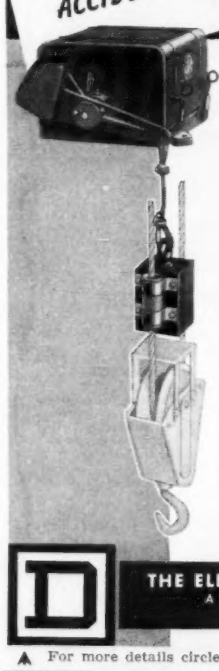


3-497

▲ For more details circle NED-277 K8 on enclosed inquiry slip ▲

Prevent OVERHOISTING ACCIDENTS

EC&M LIMIT STOPS



for AC and DC Cranes

• Crane operators work better when fear of overhoisting accidents is eliminated. The EC&M Limit Stop disconnects motor from the line for a quick stop.

On DC cranes with high hoisting speeds, dynamic braking reduces drift and aids in bringing the hook block to rest. Because EC&M Limit Stops are operated directly by the hook block, stretching of the hoisting cable does not affect tripping point.

EC&M Limit Stops are easily installed on both new and existing AC and DC cranes.

Write for Bulletin 6170

It gives the complete story of EC&M's Youngstown Safety Limit Stops

THE ELECTRIC CONTROLLER & MFG. CO.
A DIVISION OF THE SQUARE D COMPANY
CLEVELAND 28 • OHIO

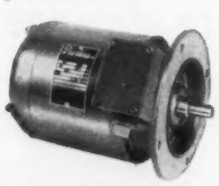
8046-R

▲ For more details circle NED-278 K8 on enclosed inquiry slip ▲

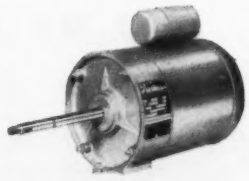
SELECTING TORQUE MOTORS

• Torque motors are special from the word go. That makes Peerless one of the best sources for torque motors in ratings from 2 lb. ft. to 200 lb. ft.

All standard frame sizes; all types of mountings; high torques; special paint and varnish treatments; and Class A, B and H insulation are available. Peerless engineers will work with you to produce the torque motor that powers your product best.



WEATHER-TIGHT SPECIAL FLANGE



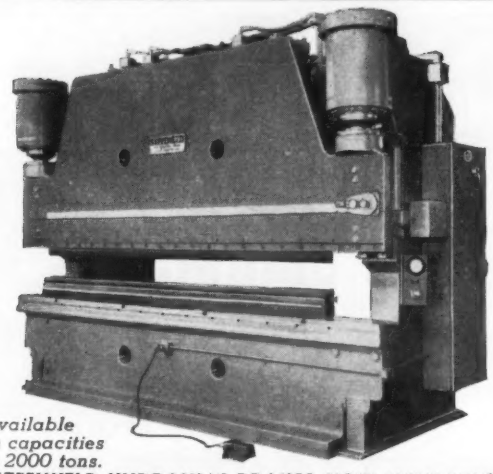
SPECIAL FLANGE REVERSING HOIST MOTOR SINGLE PHASE

FREE—NEW TORQUE BULLETIN

This bulletin outlines basic facts about Peerless torque motors and shows applications. Write for it today.

ELECTRIC MOTOR DIVISION
THE *Peerless-Electric*® COMPANY
FANS · BLOWERS · MOTORS
1527 W. MARKET ST. · WARREN, OHIO

▲ For more details circle NED-279 K8 on enclosed inquiry slip ▲



Available in capacities to 2000 tons.

STEELWELD HYDRAULIC BRAKES NOW AVAILABLE

A complete line of Steelweld Hydraulic Press Brakes with the finest features that assure accuracy and outstanding performance is now available by one of the oldest and most experienced press brake builders. The new hydraulic line supplements but does not supplant Steelweld mechanical press brakes.

Get the details on versatile feature-packed Steelweld Hydraulic Press Brakes. Ask for Catalog No. 2024A.

THE CLEVELAND CRANE & ENGINEERING CO.
6670 EAST 281st STREET, WICKLIFFE, OHIO

STEELWELD *HYDRAULIC* PRESS BRAKES

▲ For more details circle **NED-280 K8** on enclosed inquiry slip ▲

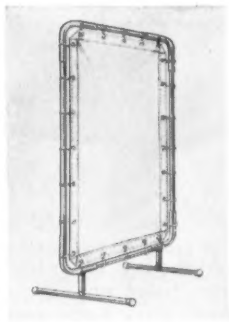
Schrader® *AIR-HYDRAULIC ROTATING PRESSURE JOINTS*
for high-speed rotation, high pressure

Now you can be sure of dependable compressed air or hydraulic installations through high-speed shafts and axles. Just specify Schrader's new Rotating Pressure Joints. Connecting a rotating member and a fixed unit, these compact, ball-bearing mounted joints assure a minimum of friction and long life. They are designed for pressures up to 400 psi and speeds up to 5000 rpm. Available with rugged steel mounting flanges to minimize vibrations encountered in high-speed operations of 2000 rpm or higher. Write for free Schrader catalog.

A. SCHRADER'S SON
Division of **SCOVILL**
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

▲ For more details circle **NED-281 K8** on enclosed inquiry slip ▲

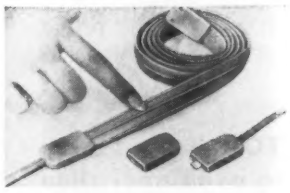
PORTABLE SCREEN
in stock sizes up to 6 x 8 ft



This single-unit portable screen can be used as a welding shield, dividing partition, or as a shield for grinding and other machine operations. Stock sizes from 4 x 5 ft to 6 x 8 ft are available. Smallest size weighs less than 15 lb. Slip-joint construction facilitates assembly in 5 min. Made by **Singer Glove Mfg. Co.**, Special Products Div., Dept. NE, 860 W. Weed St., Chicago 22, Ill.

▲ For more details circle **NED-283 K8** on enclosed inquiry slip ▲

CONTINUOUS STRIP SWITCH
8-oz finger pressure makes contact



Electrical contact is made in the more sensitive Contaflex type B continuous strip switch at pressures of about 8 oz. Original type A switch required around 40 oz of pressure. Shape and dimensions are the same as for type A, and both types have the improved vinyl jacket profile with a bead added to the top of the extrusion. Strip can be bent without shorting and will remain sensitive for switching even when bent around curved surfaces. It can be cemented to soft rubber backing. Switches are rated 1 amp at 115 v ac, resistive. However, operation below 30 v is recommended. Made by **Tapeswitch Co. of America**, Dept. NED, 116-46 228th St., Cambria Heights 11, N. Y.

▲ For more details circle **NED-284 K8** on enclosed inquiry slip ▲

FLOW RATE REGULATORS
for liquids, light slurries

Measurement and control functions are incorporated within Type F flow rate regulators, used for control of various liquids and light slurries. Unit has only two moving parts and operates with minimum pressure difference of less than 10 psi. Flow is controlled to within 3 per cent of set point, despite line pressure fluctuations. Carbon steel, 316 stainless, and special alloy regulators are offered for flows from 0.02 to 550 gpm. Each size provides 15:1 flow rate adjustment by means of calibrated linear dial. Made by **W. A. Kates Co.**, 432 Waukegan Rd., Deerfield, Ill.

▲ For more details circle **NED-285 K8** on enclosed inquiry slip ▲

LOWER COST Dust Collection AT HIGHER EFFICIENCY

Greater gas flow per tube, fewer tubes per collector, lower pressure loss — this means lower total cost for a given capacity and efficiency. • Before you buy, write for Bulletin CY, which shows how you can cut dust collecting costs with Cyclo-trell mechanical collectors.

RESEARCH-COTTRELL

RESEARCH-COTTRELL, INC. • Main Office and Plant: Bound Brook, N. J. • 405 Lexington Ave., New York 17, N. Y. • Grant Building, Pittsburgh 19, Pa. • 228 N. La Salle St., Chicago 1, Ill. • 58 Sutter Street, San Francisco 4, Cal. • Research-Cottrell (Canada) Ltd., 33 Bloor Street East, Toronto 5, Ontario.

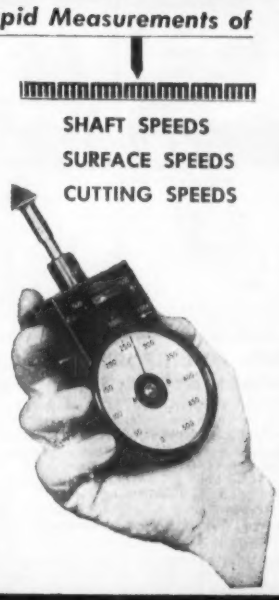
RC182

▲ For more details circle **NED-282 K8** on enclosed inquiry slip ▲

SMITHS TACHOMETERS

For Precise and Rapid Measurements of

- **Magnetic Design** Steady readings accurate to ±0.5% at any part of any scale.
- **Instantaneous Reading** No timing or waiting.
- **Self-Powered** Needs no battery. Always ready for immediate use at full accuracy.
- **Nine Ranges** To 50,000 rpm on highest. Interpolate tenths of rpm on lowest.
- **Overspeed Protection** Inherent and built-in.
- **Hold Button** "memorizes" reading when desired.



Complete Service Facilities *Send for Details and Literature*

CLARENCE J. MARX CO.
Box 4033, Cleveland 23, Ohio

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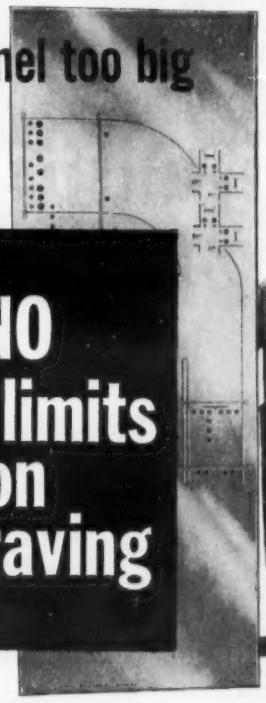
Now—

NO plate too small— 213B

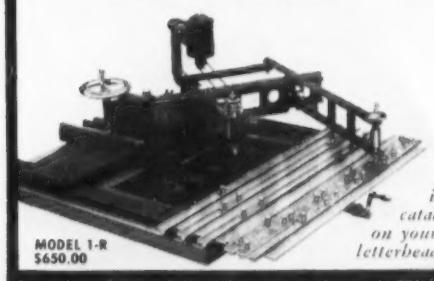
NO panel too big



NO size limits on engraving

- **ENGRAVES 18″ x 6″ RECTANGLE IN ONE SET-UP**
- Takes up only 2 feet of bench space
- Engraving chassis can be detached from base and placed directly on workpiece of *any dimension*
- Self-centering work-holder cuts down set-up time

Heavy duty cutter spindle



MODEL 1-R
$650.00

Request our 28-page illustrated catalog NR-2 on your business letterhead.

***new hermes* ENGRAVING MACHINE CORP.**
13-19 University Place, New York 3, N.Y.

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HANDLE HEAVY LOADS

N-634-RE

WITH MULTI-PURPOSE RUGER MOBILE HYDRAULIC CRANES

Reach in-under-over . . . combine almost all lifting or moving jobs into one operation with maximum safety and adaptability.

Models available are floor . . . truck . . . convertible floor and truck . . . short mast . . . high mast . . . wide base . . . adjustable legs and retractable outrigger for side lifting.

Variable speed hydraulic controls at no extra charge. Electric models optional. Send for data today.

PRICED AS LOW AS $149.00 TM ¼

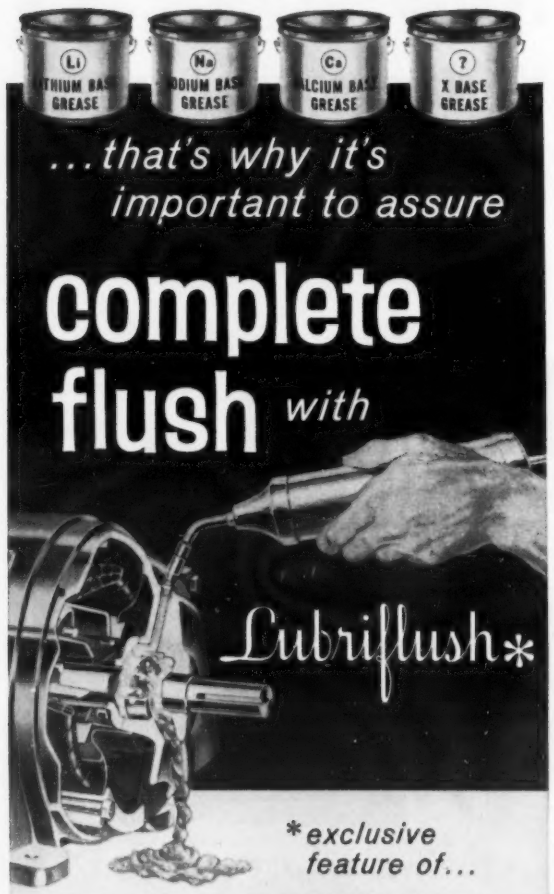
RUGER

The Crane with 1000 Uses . . . Capacities ¼ to 3 Ton

RUGER EQUIPMENT INC.
619 West Fourth Street • Uhrichsville, Ohio

For more details circle NED-288 K8 on enclosed inquiry slip

modern greases are not always compatible...



...that's why it's important to assure

complete flush with Lubriflush*

*exclusive feature of...

U.S. MOTORS

Today's greases have different chemical bases – lithium, sodium, calcium, barium, and other bases which you can't be expected to know. Some of these greases will not mix safely with others. Because certain chemical bases may react with each other, mixed grease may not keep its consistency and excessive wear may result. Putting new grease in with old, you may mix greases so as to cause bearing damage. That is why U.S. LUBRIFLUSH – an exclusive feature of U.S. Motors – is increasingly important. With this transverse lubrication system, old grease is *completely* flushed out as new grease is forced in. There's no mixing. You can put in new grease without bothering to determine whether it's basically compatible with the old. LUBRIFLUSH, moreover, assures proper lubrication for longest bearing life. Another good reason to specify: "U.S. ELECTRICAL MOTORS."

U.S. ELECTRICAL MOTORS INC.

BOX 2068, LOS ANGELES 54, CALIF. OR MILFORD, CONN.

FREE COLOR BROCHURE...for full information send for FREE Lubriflush Bulletin.

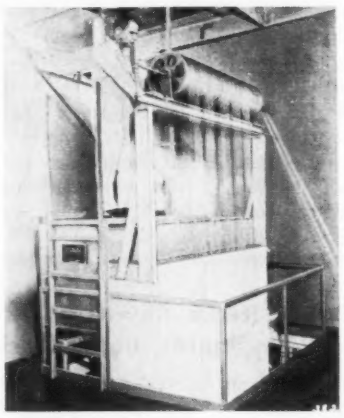
For more details circle NED-289 K8 on enclosed inquiry slip

BARREL FINISHING MACHINE in 5 to 30-cu ft capacities

Operation of the Techline Model 30 barrel finishing machine is so vibration-free that a coin balanced on edge on the housing will remain standing throughout the cycle. Series features molded glass fiber safety gate, full-opening doors on the cylinder, and door sealing by 90-degree cam locks which exert high compression pressure on the neoprene seals. Power is transmitted by noiseless V-belt drive. Safety controls prevent operation while gate is open, except for jogging. Twenty models range from 5 to 30-cu ft capacity. They have from one to six separate compartments designed for both wet and dry processes. Calendered neoprene, rubber, and steel plate cylinder liners are available. Made by **Wheelabrator Corp.**, Techline Div., 1128 Ave. V, Vicksburg, Mich.

For more details circle NED-290 K8 on enclosed inquiry slip

OVEN FUME ELIMINATOR improves enameling oven operation



This fume combustion unit for vertical wire enameling ovens not only eliminates fumes, but improves oven operation, reduces frequency of shutdowns, and minimizes fire hazard caused by condensate in exhaust ducts. Ovens can operate continuously, for a year or more. Controlled oven exhaust somewhat reduces oven fuel consumption. Quality of wire is made independent of natural stack draft. Unit comes fully assembled for mounting on top of oven and has factory-wired control panel. Made by **Catalytic Combustion Corp.**, 4726 14th St., Detroit 8, Mich.

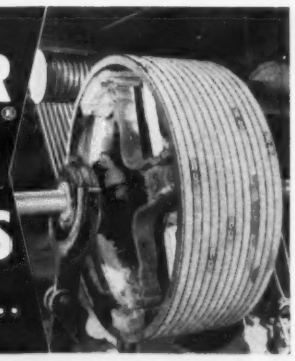
For more details circle NED-291 K8 on enclosed inquiry slip

ADDENDA

In the description of the imported gasoline, electric, LP-gas, and diesel industrial lift trucks (*NED*-215 *J8, Sept.* '58), an important feature of this line was omitted. The company has established complete parts stocks and service facilities from coast to coast in the United States. Trucks in capacities of 2200 to 6000 lb are available from **O. M. Lift Co. of America, Inc.**, 333 Bergen Blvd., Fairview, N. J.

For more details circle NED-292 K8 on enclosed inquiry slip

ALLIGATOR® V-BELT FASTENERS make this possible...



Now you can keep costly "downtime" at a minimum (no need to dismantle machinery) . . . make up special size V-Belts quickly . . . simplify the replacement of worn or damaged V-belts.

Remember: Open-end V-Belting assures you of . . .
- Far less stretch than other "connected-type" belting
- Top drive performance — greater traction surface between drive belt and sheave.

And! . . . Alligator V-Belt Fasteners provide one strong joint . . . terrific holding power!

FOUR TYPES . . .
- Regular Alligator V-Belt Fasteners for B, C, D, E and BB V-Belting.
- Aluminum • Monel
- Permanently Assembled Fasteners.

ORDER FROM YOUR DISTRIBUTOR OR WRITE TO . . .

Flexible STEEL LACING COMPANY
4664 LEXINGTON ST. • CHICAGO 44, ILLINOIS

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"EVERYTHING IN CARBON but diamonds!"

Write for details on any product:

- ☐ CATHODIC RUST PREVENTION RODS • BEARINGS ☐
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- ☐ CHEMICAL ANODES • and dozens of specialties

STACKPOLE CARBON CO., St. Marys, Pa.

STACKPOLE

PIONEERS IN CARBON PROGRESS

For more details circle NED-294 K8 on enclosed inquiry slip

Here's information you'll want on STANDARD TRADEMARK precision timers

Accurate, reliable, versatile Elapsed Time Indicators. Synchronous motor drive, manual or electric zero reset. Electric clutch controlled by manual or automatic switch or output of electronic tubes. Units available for flush panel mounting or portable use.

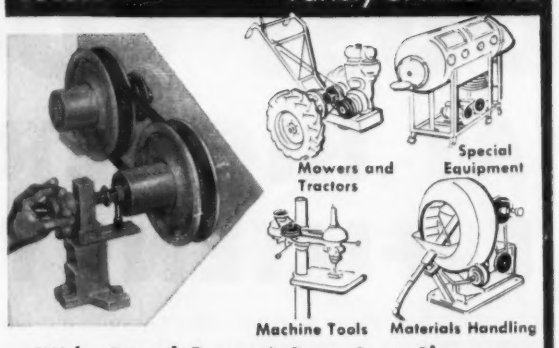
Model	Scale Divisions	Totalizes	Accuracy
S-100	1/5 sec.	6000 sec.	±.1 sec.
S-60	1/5 sec.	60 min.	±.1 sec.
SM-60	1/100 min.	60 min.	±.002 min.
S-10	1/10 sec.	1000 sec.	±.02 sec.
S-6	1/1000 min.	10 min.	±.0002 min
S-1	1/100 sec.	60 sec.	±.01 sec.
MST	1/1000 sec.	.360 sec.	±.001 sec.
MST-500	1/1000 sec.	30 sec.	±.002 sec.

REQUEST BULLETIN NO. 198

THE STANDARD ELECTRIC TIME COMPANY
89 LOGAN STREET • SPRINGFIELD, MASSACHUSETTS

For more details circle NED-295 K8 on enclosed inquiry slip

SPEED SELECTOR VARIABLE PITCH SHEAVES Control Speeds on Variety of Machines



Wide Speed Range! Low Cost Sheaves

Speed Selector Sheaves can give your machines or equipment extra wide-range speed control on fixed centers. Efficient, rugged, simple to use — low in cost! Write for Illustrated Bulletin.

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P.O. BOX 312-N • CHAGRIN FALLS, OHIO

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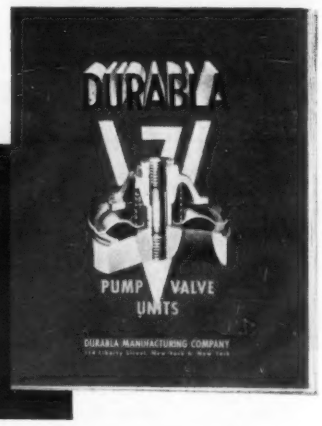

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to select improved valves for your pumps

Famous for sustained efficiency under widely varied service conditions, DURABLA Pump Valve Units have been redesigned to incorporate a new taper-lock* stud, self-locking nut and drop-on guard. This improved design offers *seven new points of superiority.*

The booklet shows how DURABLA Pump Valve Units can benefit your pumps. Includes design details, materials available, table of seat sizes and dimensions. Send for free copy of Form 400 NED108.

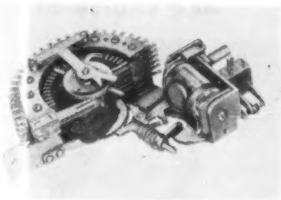
DURABLA MANUFACTURING COMPANY
114 Liberty Street, New York 6, N.Y.

DURABLA®

*Patent Pending DM-29

▲ For more details circle NED-297 K8 on enclosed inquiry slip ▲

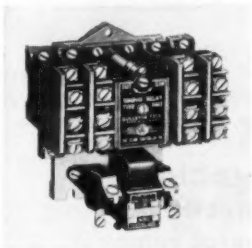
SWITCH SPARK ARRESTERS on stepping switches and relays



Silicone-carbide varistors replace the capacitor - resistor combinations formerly used for spark suppression on all 24, 48, and 110-v dc Type 44 and 45 rotary stepping switches and Series OCS relays. These semiconductors save weight and space, suppress arcs more effectively, and minimize radio interference. They are mounted directly to the coil terminals. Varistors with two 2-in. leads are available for replacing old type spark suppressors on existing switches and relays. Made by **Automatic Electric Co.**, Northlake, Ill.

▲ For more details circle NED-300 K8 on enclosed inquiry slip ▲

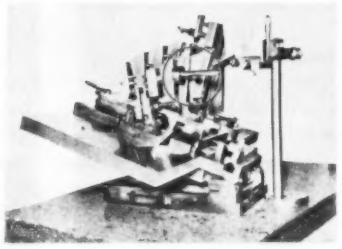
TIME DELAY RELAY in delays from 0.2 sec to 3 min



Added to line of 10-amp relays is this 600-v Bulletin 7313 Type PMT pneumatic time delay relay which has space-saving modular construction. Universal poles with isolated contacts allow two circuits per pole to be used, even at opposite polarity. Extra vertical space is not required for latch and timing mechanism, thus relays can be located anywhere in rows on panels without wasting space. The PMT relay is available in 32 variations of five basic models. Class A models have delays adjustable from 0.2 sec to 3 min with repetitive accuracy of ±10 per cent. Class B basic model is adjustable from 0.2 sec to 1 min, with ±15 per cent repetitive accuracy. Made by **Clark Controller Co.**, 1148 E. 152nd St., Cleveland 10, Ohio.

▲ For more details circle NED-301 K8 on enclosed inquiry slip ▲

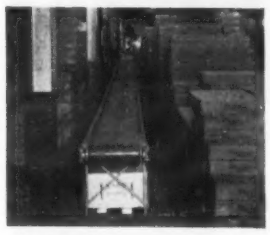
CYLINDER SQUARE for checking shafts, spindles, bores



About half the size of the smallest previous model, this cylinder square is suited for inspection of parts in hard-to-reach places. It can be used in checking squareness, parallelism, concentricity, and run-out of component parts, shafts, spindles, bores, and similar objects. Magnets in its base hold it to the part or object being checked. Base has a 1 7/16-in. diameter. The 4½-in. long checking surface is square with the base within 0.000050 in. Made by **AA Gage Co.**, 356 Fair St., Detroit 20, Mich.

▲ For more details circle NED-302 K8 on enclosed inquiry slip ▲

Loading-out costs cut up to 65% with OLIVER Farquhar CONVEYORS



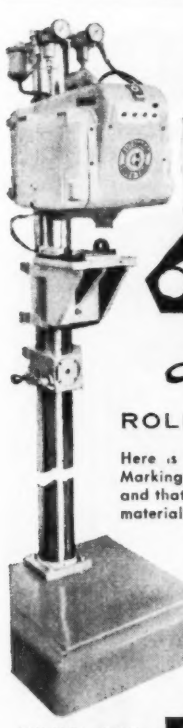
View above shows one of the two 160-foot Oliver-Farquhar Model 536 Power Belt and Roll-Free Gravity lines as seen from the extreme end looking toward the loading dock. View below shows how the cartons move from the power belt line in the background to the gravity line where shipments are labeled and then move over the booster conveyor to the loading dock.

Mr. Louis DiLorenzo, Traffic Manager of Warren Webster & Company, Camden, New Jersey, has replaced the "all hands" with the "no hands" method of material handling. In their Shipping Department this "no hands" technique requires two single line Oliver-Farquhar Conveyor systems. The products of the company, heating and air-conditioning equipment, are stacked on either side of these lines. Loading-out to waiting trucks now can be done quickly and efficiently from either conveyor line.

At Warren Webster they've eliminated overtime, improved inventory control, speeded truck loading, cut costs up to 65% and reduced employee fatigue. Why don't you take advantage of this same "no hands" method of material handling? Write, wire or phone for all the facts on Oliver-Farquhar Power Belt and Gravity Conveyors—they're your key to cutting costs!

A. B. FARQUHAR DIVISION
The Oliver Corporation
Conveyor Dept. O-04, York, Penna.
Factory Branch: 618 W. Elm St., Chicago 10, Illinois

▲ For more details circle NED-304 K8 on enclosed inquiry slip ▲



Now! MARK FLAT, ROUND, CONTOURED SURFACES *at* HIGH SPEEDS!

MARKS ANY SHAPE

WITH *Automark* (MODEL HRMA) ROLL MARKING MACHINE

Here is speed, versatility and adaptability in a Marking Machine that operates by air pressure and that is controlled electrically. Marks any shape material . . . round, flat or contoured.

CUTS PRODUCTION COSTS... GREATLY INCREASES OUTPUT

The Automark operates at speeds up to 6,000 or more 1-inch strokes per hour, or 1,400 strokes per hour on stroke of ram and die slide combination. Think of all the saving in time and money with Automarks in your shop!

AUTOMATIC FEEDS *and* FIXTURES MAY BE SUPPLIED...

SEND FOR BULLETIN ▶ **DEFIANCE MACHINE & TOOL CO.** 1922 S. VANDEVENTER Dept. QD ST. LOUIS 10, MO.

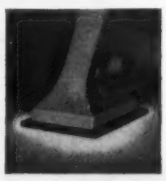
▲ For more details circle NED-298 K8 on enclosed inquiry slip ▲

If you can use shears you can CONTROL VIBRATION

with low-cost **ISOMODE® PADS!**

A pair of shears and a standard package of Isomode Pads . . . that's all you need to isolate troublesome shock and vibration on as much as 80 tons of machinery.

Made of durable, resilient DuPont neoprene, these ribbed pads support up to 50 lbs. per sq. in.—do an effective job of muffling plant noise and reducing maintenance costs on machines and buildings.



Installation is utter simplicity—simply cut to fit machine feet and install. No waste, no fuss, minimum down time. Write for prices and Application Bulletin No. 415.

MB MANUFACTURING COMPANY
A division of Textron Inc.
1066 State Street, New Haven 11, Conn.

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BY YEARS OF HARD EVERYDAY USE IN THOUSANDS OF PLANTS

HANSEN QUICK-CONNECTIVE PUSH-TITE COUPLING

To connect a Hansen Push-Tite Coupling, you merely push the Plug into the Socket. Flow is instantaneous. To disconnect, push back sleeve on Socket—Coupling disconnects with instant, automatic shut-off of fluid. No tools required. Free-swiveling Plug eliminates any possibility of kinks in hose.

ONE-WAY SHUT-OFF
- Instant automatic flow and shut-off.
- Quick connection and disconnection.
- Leak-proof, minimum wear locking device.
- Integral factory assembled, tamper-proof socket head.

Two-Way Shut-Off and Straight-Through Couplings also available.
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Representatives in Principal Cities

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What kind of Solid tires do you need?

Free B.F.Goodrich TW Analysis tells you which tires are right for your job!

Can save you up to 50% on industrial tire costs!

Do you need a pneumatic or solid industrial tire? What tread design—what tread compound—is best for your materials handling work? The FREE B.F.Goodrich Tire and Wheel Analysis gives you the answers. They're answers that can save you up to 50% on industrial tire costs, up to 20% on maintenance.

Just mail the coupon below. Without cost or obligation, a B.F.Goodrich TW Analysis man will study your hauling surfaces, equipment, loads and other problems. Then he'll recommend the *right* industrial tires for you to use. His recommendations are unbiased, because B.F.Goodrich makes a complete line of industrial tires.

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NORTHERN

NEW HEAVY DUTY
HI-LIFT HOISTS

For severe, continuous service this new NORTHERN HI-LIFT ELECTRIC HOIST, in capacities from three to 15-tons, has double 4-wheel swiveled trucks for better distribution of load, to minimize wear on truck wheels and track, and other heavy duty features necessary to meet the hardest service requirements.

Send for Bulletin H-112

LOOK OVERHEAD — SEE NORTHERN

NORTHERN ENGINEERING WORKS
210 CHENE ST., DETROIT 7, MICH.

EH-3554

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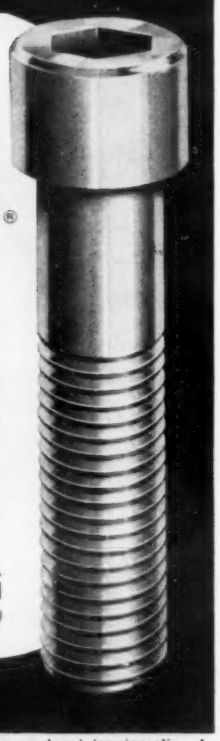

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- Rigid QUALITY CONTROL from initial steel selection to final packaging
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1957 Reading Road
Cincinnati 2, Ohio

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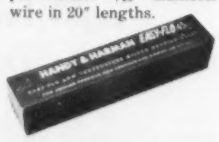
SIL-FOS – 25 individual cartons per case containing 20 sticks per carton; .050" x 1/8" x 20".

EASY-FLO 45 – 25 individual cartons per case, 17 pieces per carton. 1/16" diameter wire in 20" lengths.



New small packages of Easy-Flo and Sil-Fos

Low cost... Buy what you need... USE what you Buy!

Many users of silver brazing alloys can benefit from these small packages of EASY-FLO and SIL-FOS. No more on-the-job waste, exact amounts in small quantities do away with alloy "scrap" problem – "scrap" that costs you money. Now you can "carton out" your brazing alloy for each job and know how much you're using and how much you will need. Purchase by the case or carton, either way your alloy inventory is kept to the neatly packaged minimum.

Your supplier should have the new EASY-FLO and SIL-FOS packages on his counter now. Look for the familiar Handy & Harman blue and silver colors. GET WHAT YOU NEED – WHAT YOU CAN *USE* NOW!

DEALERS—WHOLESALERS!
Stock EASY-FLO and SIL-FOS now for maximum profit. These original silver brazing alloys outsell all other brazing alloys in the U.S. combined. For details and prices see any Handy & Harman distributor (list on request) or write direct.

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OAKLAND, CALIF.
TORONTO, CANADA
MONTREAL, CANADA

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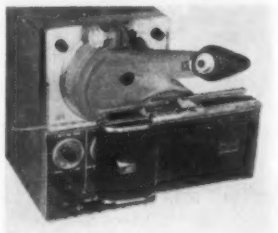
OSCILLOSCOPE CAMERA offers multiple exposure feature and choice of f/1.9 or f/2.8 lens

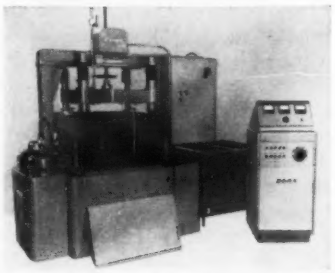


A 1:1 object-to-image ratio is offered by the Type 35B oscilloscope - record camera which fits any standard 5-in. oscilloscope and is normally supplied with a Polaroid - Land back. It can be converted into a Graflex camera unit using standard Size 120 roll, sheet, or pack film. A sliding detent back permits accurate positioning for multiple exposures on the film.

Camera can be rotated 90 degrees to place the long film dimension parallel to the vertical axis of the scope, thus permitting more traces per frame. Either an f/1.9 or f/2.8 lens is available. Shutter adjustment for the former is 1 to 1/100 sec, plus time or bulb. Latter has 1/25 to 1/100 sec, plus time and bulb shutter. The trace can be monocularly viewed during taking of pictures without fogging the film. The 10-lb unit measures 13 x 9½ x 9 in. Made by **Allen B. Du Mont Laboratories, Inc.**, 760 Bloomfield Ave., Clifton, N. J.

▲ For more details circle NED-309 K8 on enclosed inquiry slip ▲

ELECTRO-CHEMICAL MACHINING entire process is electronic, has high rate of metal removal



Extremely high rate of metal removal is claimed for the electro - chemical machining process, conducted on safe, simple to operate machines that require but little operator training. An electrode similar to that used in electrical discharge machining and the workpiece are submerged in a saline solution for electro-chemical metal removal.

Rate of removal is controlled by a sensitive servo feed system that automatically advances the electrode into the workpiece. Gap between electrode and workpiece has a low limit of 0.015 in. Metal removal rates are listed in ranges of 500 to 50,000 amp.

Using a 5000-amp power supply rating, removal rate is 30 cu in. per hour with a minimum electrode area of 100 sq in. Power supply of 50,000 amp removes 300 cu in. per hour with a minimum electrode area of 1000 sq in. The electrode, which can be used many times without appreciable wear, can be made of any conductive material. Made by **Elox Corp. of Michigan**, Dept. NED, 1838 N. Stephenson Highway, Royal Oak 3, Mich.

▲ For more details circle NED-310 K8 on enclosed inquiry slip ▲

Check with LYNAIR *ON YOUR AIR AND HYDRAULIC* FIRST! CYLINDER REQUIREMENTS

REGARDLESS OF YOUR NEEDS WE CAN SUPPLY THEM

Check these Advantages

- √ We engineer and manufacture Air and Hydraulic Cylinders for every application
- √ Cylinders meet J. I. C. standards
- √ Airdraulic cylinders for controlling feed in both directions
- √ New design Piston Packing assures minimum of bypass on hydraulic cylinders
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Delivery to meet your requirments.

WRITE FOR NEW CATALOG

LYNAIR Inc. 3100 E. MICHIGAN AVE. JACKSON, MICHIGAN

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HERE...Where Cleanliness is Critical

SPENCER VACUUM CLEANERS

Boeing Airplane Co., Seattle, Wash.

In aircraft production . . . as in other "precision" industries . . . cleanliness is more than a matter of maintenance. It's *vital* to proper quality control.

At Boeing, for example, dirt must be kept away from delicate instruments as they are installed. And areas which will be covered subsequently, must be thoroughly cleaned.

Whether *your* prime need is quality control or plant maintenance, it will pay to check on rugged, dependable SPENCER vacuum cleaners . . . industry's "tool of a hundred uses."

Request Catalog No. 1558

The SPENCER TURBINE COMPANY
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THE HOTTEST THING IN WELDING

TORCHES *by Dockson*

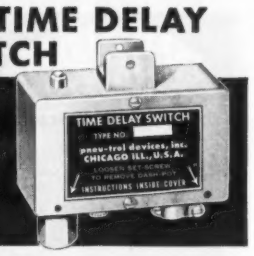
Get a Dockson Torch and enjoy the pleasure of handling the finest. Feel the perfect balance of the rigid one-piece, silver soldered construction. Here is top quality in workmanship and materials for long, dependable service. Dockson Torches have a better seal compound, developed especially for oxy-acetylene service in both mixer and union rings. The two ring construction means fewer rings to replace, stronger construction. Dockson Torches are easily serviced with standard stock replacement parts that fit like the originals.

There's a Dockson Torch built to do your job and priced to fit your budget.

Write for your distributor's name and Dockson's complete catalog of welding and cutting equipment. Be sure it's a Dockson to be sure of better service.

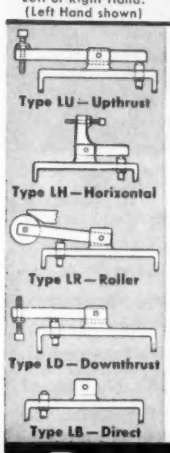
▲ For more details circle NED-313 K8 on enclosed inquiry slip ▲

Pneu-Trol TIME DELAY CONTROL SWITCH



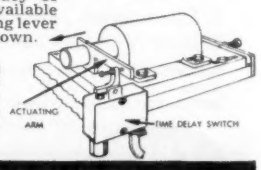
...Gives Cylinder Applications Greater Efficiency Accuracy ...Wider Use!

For any type actuation Left or Right Hand. (Left Hand shown)



- Holds Cylinder dwell accurately to fraction of second.
- Automatically re-sets.
- Simple, Compact, Rugged.

You can hold any motion or operation controlled or actuated by air or hydraulic cylinders at a positive stop on either end of the stroke for ¼ to 60 seconds in 20 to 1 ratios with Pneu-Trol Time Delay Control Switches. Simple in design with positive hydraulic timing action . . . compact and easily mounted on the machine or fixture, Pneu-Trol Switches are providing millions of trouble-free actuations in solenoid-operated cylinder applications of every type. Positive, controlled time dwell permits wider use of air or hydraulic power in automatic operations, increases accuracy of work by insuring split-second accuracy of the dwell. Available with 5 actuating lever linkages as shown.



Switch mounted to provide dwell at end of power stroke of single action, spring return cylinder.

Pneu-Trol DEVICES, INC.
1432 N. KEATING AVENUE • CHICAGO 51, ILL.

For more details circle NED-314 K8 on enclosed inquiry slip

For the finishing touch that means so much!

For fast, efficient grinding, smoothing and polishing — on everything from stainless steel tableware to modern power tools — it pays to specify Jewel Brand Coated Abrasives. Remember . . . end products cost less when you finish with Jewel Brand Abrasives. Order from your Industrial Distributor or write for specific recommendations.

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COATED ABRASIVES
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ABRASIVE PRODUCTS, INC.
South Braintree 85, Massachusetts

For more details circle NED-315 K8 on enclosed inquiry slip

STENCIL ROLLER unit is self-inking

Ink supply for the Rol Flo self-inking stenci roller is contained in th squeezable plastic bottl which serves as a handle No inking pad is required. Valve action permits constant ink control to meet the ink flow required, regardless of surface porosity. Ink is evenly distributed by a microcell rubber roller. Made by **Diagraph-Bradley Industries, Inc.**, AA Div., Box 269, Herrin, Ill.

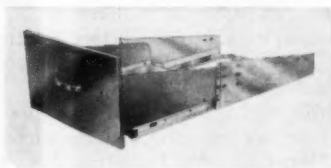
For more details circle NED-317 K8 on enclosed inquiry slip

TILTING ARBOR SAW has precision adjustments

Precision rip and miter adjustments for close tolerance work, safety plug adapter for grounding, and a locking key switch in addition to the usual toggle switch are features of redesigned Shopmaster tilting arbor table saw. The TA8-A deLuxe saw is offered with rip fence, miter gage with stop rods, rip fence track, and two side table extensions. A stand is optional. Shopmaster tools are now produced by **Energy Mfg. Co.**, Shopmaster Div., Monticello, Iowa.

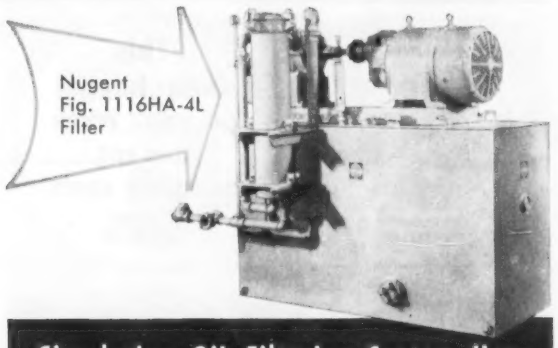
For more details circle NED-318 K8 on enclosed inquiry slip

SLIDING SHELF ASSEMBLIES accommodate 22 x 20-in. chassis



Used in standard 19 and 24-in. wide racks, Par-Metal sliding shelf assemblies accommodate chassis up to 22 in. wide and 20 in. deep. Steel mounting brackets will handle loads weighing up to 60 lb. Assemblies are mounted directly on relay rack the same as any panel. They can be pulled out to full depth in front of rack, affording complete access to apparatus mounted on the slide shelf. Basic slide assemblies, phono drawer units, storage drawers, and retractable desk shelves comprise the available designs. Usable space from front to rear varies from 14 to 20 in. Prices range from $17.50 to $46. Made by **Par-Metal Products Corp.**, 32-66 49th St., Long Island City 3, N. Y.

For more details circle NED-319 K8 on enclosed inquiry slip



Circulating Oil Filtering System Uses NUGENT FILTER

A number of these compact units are now in operation in the Southeastern plant of a leading producer of synthetic fibers. A Nugent Fig. 1116HA-4L filter is the workhorse of each system which filters and circulates 300 SSU viscosity lubricating oil at the rate of 35 GPM.

The complete units were built by Louis H. Hein Co., Ardmore, Pa. They can be adapted for use with hydraulic oil, coolant, quenching oil, various chemicals and other liquids. Write for information.

ESTABLISHED 1897
WM. W. NUGENT & CO., INC.
3402 CLEVELAND STREET • SKOKIE, ILLINOIS

REPRESENTATIVES IN PRINCIPAL CITIES

OIL FILTERS • STRAINERS • TELESCOPIC OILERS
OILING AND FILTERING SYSTEMS • OILING DEVICES
SIGHT FEED VALVES • FLOW INDICATORS

For more details circle NED-320 K8 on enclosed inquiry slip

MAKE IT OF PLASTICS?

HOW? All of the parts illustrated here are made of Synthane industrial plastics. Each one, however, is differently constructed.

1. is machined from laminated sheet stock, 2. is made from a combination of sheet and tube stock, 3. is a tubular form, 4. machined from molded-laminated, 5. is post formed, 6. is molded-macerated, 7. is a combination of Synthane wound on aluminum.

These are a few reasons why a good laminator, such as Synthane, can best fabricate your products. Anyone who knows Synthane will tell you, "Synthane turns out a first class job in good time at a fair price."

SYNTHANE
SYNTHANE CORPORATION
N.E. River Road, Oaks, Pa.

☐ Send me promptly information about Synthane laminated plastics and parts.

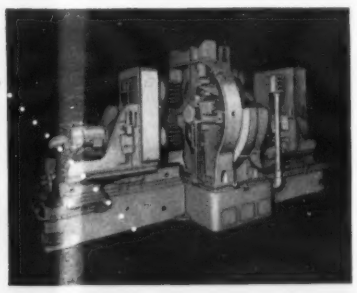
Name_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-321 K8 on enclosed inquiry slip

dependable machine support . . . begins with an

EMPCO

leveling jack



Dependable, easy-to-adjust Empco Leveling Jacks provide a solid foundation for machine tools, large surface plates, automation lines, tool room and production equipment of all types. Periodic leveling? It's a matter of seconds! Simply turn hex-screws . . . your machine is set level . . . kept level!

Combined with Vi-Sorb Mounting Pads, Empco Jacks control vibration within the machine itself, reduce transmitted noises, retard machine creepage and frequently eliminate the need for anchor bolts!

Support? Up to 10 tons each! Available in six styles, 25 models . . . an Empco Jack to meet every job requirement. Set your machines level, keep them level. Reduce machining costs with Empco Jacks!

INQUIRE TODAY ask for Bulletin No. 100

The Enterprise Machine Parts Corp.
2727 Jerome Ave., Detroit 12, Michigan

EMPCO LEVELING JACKS

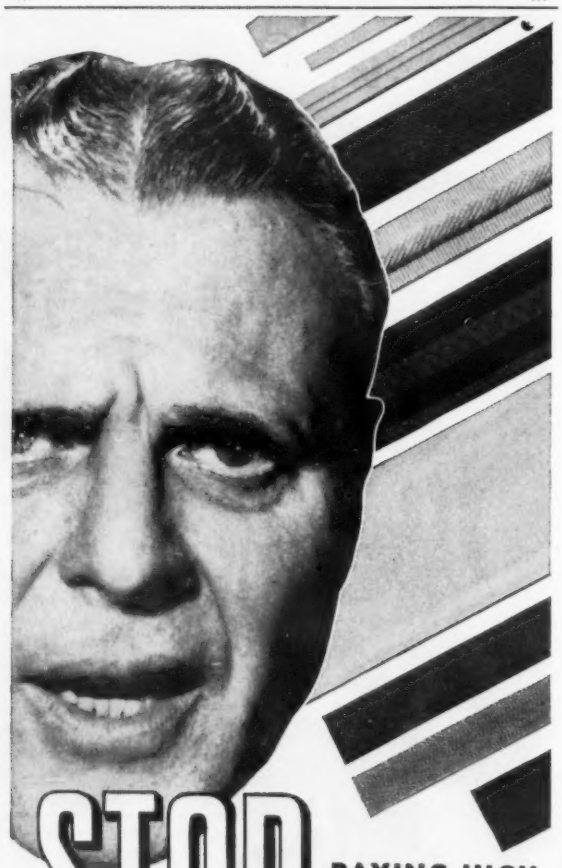
Manufacturers of Automatic Production Machines, Fixtures, Machine Parts

For more details circle NED-316 K8 on enclosed inquiry slip

It's easy to cut costs with this hopper. Use it instead of a tote box for handling all kinds of wet or dry, hot or cold bulk materials. Pick it up with your lift truck . . . move it to its destination . . . flip the latch and the hopper automatically dumps its load, rights itself, locks itself. One man does the entire job in a fraction of the usual time. Roura Self-Dumping Hoppers are ruggedly built of 3/16" steel plate with continuous arc-welded seams. Five sizes, ½ to 2 yard capacity, mounted on live or semi-live skids with choice of wheels. Standard models shipped from stock. Also available in stainless steel or galvanized. For details and literature, write ROURA IRON WORKS, INC., 1415 Woodland Ave., Detroit 11, Mich.

ROURA Self-Dumping HOPPER

▲ For more details circle NED-322 K8 on enclosed inquiry slip ▲



STOP PAYING HIGH PRICES FOR "SPECIAL WEBBING"

We can probably supply it at a standard price!

Because we are America's OLDEST Webbing manufacturer, we naturally have the biggest line of Standard Webbings in the country. From dainty little nylon straps for milady's footwear to rugged cargo straps, we carry hundreds of sizes, widths, weights, plain colors and fancy patterns. This tremendous assortment includes cotton, nylon, dynel, dacron, jute, combed peeler mercerized and high tensile webbings. 80% of our STANDARD line would be considered "SPECIALS" by other manufacturers and sold to you from the "SPECIAL" price list. That's why, no matter what use you have for webbing, you can very likely save money here. Let us give you the facts.

Write for FREE SAMPLES and PRICES

Tell us how much webbing you use annually and if possible send a sample for us to match.

BUFFALO WEAVING AND BELTING CO., INC.
210 CHANDLER STREET BUFFALO 7, N. Y.

We also manufacture a complete line of WOVEN COTTON CONVEYOR BELTS and PURE SHEET RUBBER.

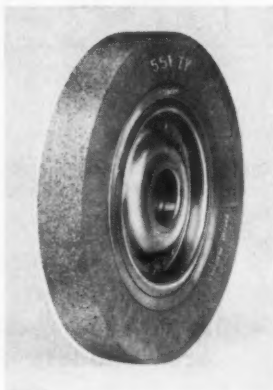
▲ For more details circle NED-323 K8 on enclosed inquiry slip ▲

LOW-LIFT PALLET TRUCK
for narrow aisle operation

Compact drive mechanism of the Model PXG Powerox electric low-lift pallet truck has the motor and transmission above the drive wheel to minimize over-all length. It can operate in 6-ft aisles with 48 x 48-in. pallet loads. Power lifting and power lowering pushbuttons located on the rear of the handle positively control retraction and extension of the rear wheels. Motor, pump, overload relief valve, and reservoir of the improved hydraulic unit are packaged unit. Pallet entry discs on fork ends give the effect of 3 in. added to the roller diameter to help fork entry into the pallets. Total lift is 4 in. Models with 4000 and 6000-lb capacity are available from **Barrett-Cravens Co.**, 628 Dundee Rd., Northbrook, Ill.

▲ For more details circle NED-324 K8 on enclosed inquiry slip ▲

POWER BRUSH WHEELS
plastic supports wires resiliently



Resiliently supported wire points of Osborn TY wheel brushes enables them to perform a wide range of metal finishing and deburring, material surfacing, leather and plastic roughing, and rubber and plastic removal jobs. The long life brushes are made with an elastomer added and feature a perpetually short trim brushing face. They are made in Master type construction in diameters to 15 in. and face widths from 1 to 2¼ in.; in up to 12-in. OD Monitor types; in wide-ring Matic styles; in small Ringlock types for use on small portable tools; in insulation stripping styles; and in cup types for cleaning of large surfaces. Made by **Osborn Mfg. Co.**, 5403 Hamilton Ave., Cleveland 14, Ohio.

▲ For more details circle NED-325 K8 on enclosed inquiry slip ▲

CORRECTION

In the description of the new Model 800 25-ton automatic plastics molding press (*Item NED-521 H8*) in the August 1958 issue, it was incorrectly stated that this press molds "thermoplastic materials." This press is suited only for molding "thermosetting plastics." This fast, air-operated, automatic machine is made by **F. J. Stokes Corp.**, Press Div., 5900 Tabor Rd., Philadelphia 20, Pa.

▲ For more details circle NED-326 K8 on enclosed inquiry slip ▲

FICTION and FACT

FICTION: R P Paint Arrestor Equipped Booths Cost More than other Methods of Paint Overspray Removal.

FACT: Comparisons Show R P Paint Arrestor Booths' Operating Cost 30-50% Less than Water Wash Booths of Equal Size.

Photo Courtesy American-Standard, Elyria, Ohio Plant

RP PAINT ARRESTORS

R P Paint Arrestors save money in other ways, too. Maintenance is simple—labor costs average 40 to 85% less than for equivalent water wash booths. Down-time is reduced considerably, production is increased, less floor space required. And, with all the savings, R P Paint Arrestors are more efficient—and adaptable to almost every type operation. Write for more information.

Products of Research

RESEARCH PRODUCTS Corporation
Dept. 32, Madison 10, Wis.

▲ For more details circle NED-327 K8 on enclosed inquiry slip ▲

Without Obligation: Send us a sample of your material. We will shred it and return it to you . . . without obligation.

Quickly shreds newspapers, magazines, waste paper, cellophane, tissue, corrugated cartons, wax paper, etc. into uniform resilient 1/8" to 3/8" strands, ideal for packaging purposes. Especially adapted to shredding confidential records, blue prints or any classified material. Send for descriptive bulletin S1255. Names of users near you available on request.

FREE TRIAL! Operate a SHRED ALL for 30 days — if not satisfied — return — owe nothing.

UNIVERSAL SHREDDER CO.
2934 Bay Road — Saginaw, Michigan

▲ For more details circle NED-328 K8 on enclosed inquiry slip ▲

HERE'S PROOF OF PERFORMANCE . . .

"Without question, Clausing 12¾" Lathes give you more for the money than any lathe of comparable size or price. We especially like their heavy construction which enables us to take deeper cuts, and hold tolerances better on repetitive operations." This statement by Bill Rogie, Flynn Manufacturing Co., is typical of the reports we receive from Clausing owners everywhere. Here are a few of the reasons why:

Flame hardened bedways are standard equipment *at no extra cost* on Clausing lathes. Headstock, apron and quick-change box are totally enclosed and gears and shafts travel in bath of oil—another important exclusive. Spindle is forged steel with 1⅝" bore, hardened and ground ASA – L-00 tapered key-locked nose. Spindle turns on Timken "Zero-Precision" tapered roller bearings. Tail stock has No. 3 MT ram.

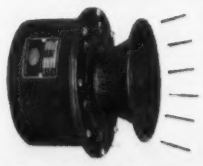
Compare *all* the features. Compare price. See for yourself why Clausing is acclaimed the outstanding lathe value – the lathe for *your* shop.

CLAUSING DIVISION *Write for Free Literature*
10-113 N. PITCHER ST. • ATLAS PRESS COMPANY KALAMAZOO, MICHIGAN

▲ For more details circle NED-329 K8 on enclosed inquiry slip ▲

A gentle chime . . . a BLASTING horn

. . . or a complete audio-visual communication system



AC "CM" HORNS
Cat. No. 128-S

You can depend on Sperti Faraday for the latest in sound and sight communications. For complete information write: Sperti Faraday, Adrian, Michigan. In Canada—write Sperti Faraday of Canada, Ltd., Montreal.

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Fire Alarm Systems
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Since 1875 Designers and Producers of Visual and Audible Signals

ADRIAN, MICHIGAN

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KEEP MACHINES RUNNING
...reduce maintenance costs,

¾" Size Union Illustrated

for water, steam and air service!

Here is a compact, efficient rotating union—

- ★ LEAKPROOF
- ★ CORROSION PROOF
- ★ EASY TO SERVICE
- ★ VIRTUALLY FRICTIONLESS
- ★ PRECISION BUILT FOR LONGER LIFE
- ★ INTERCHANGEABLE with any other rotating union
- ★ VERSATILE—For Monoflow or Duoflow operation, available in ½", ¾", 1", 1¼" and 1½" sizes
- ★ MINIMUM TORQUE makes it ideal for high speed applications

See how this dependable, new rotating joint can reduce inventory of replacement parts because of Deublin's standardization of sizes. Keep "shut downs" from wrecking your production schedules. Pays for itself many times over.

104 *Write today for full details and prices.*

DEUBLIN COMPANY
1151 Waukegan Road
Glenview, Ill. (Chicago Suburb)

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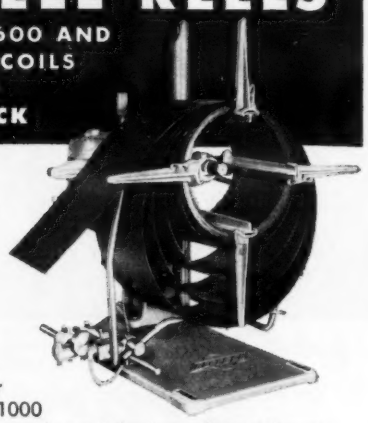
LITTELL REELS
FOR 300, 600 AND 1,000 LB. COILS DELIVERED FROM STOCK

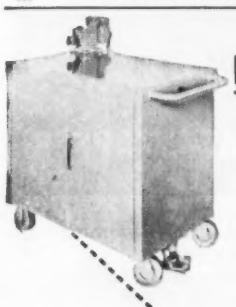


No. 10 Littell Motor Driven Automatic Centering Reel for up to 1000 pound coils.

Three sizes of Littell Reels, for 300, 600 and 1000 pound coils are now in stock for *immediate* delivery. Easy to load, they center the coil automatically, hold it in balanced position. You get easy, smooth unwinding, greater accuracy and higher speeds for both hand and automatic feeding. All three sizes available in single or double Plain Brake or Motor Driven Reels. Write for catalog SECTION "D".

F. J. LITTELL MACHINE CO. — Speed with Safety
ROLL FEEDS • COIL CRADLES
STRAIGHTENING MACHINES
REELS • AIR BLAST VALVES
District Offices: Detroit, Cleveland
4169 N. RAVENSWOOD AVE., CHICAGO 13, ILL.

▲ For more details circle NED-332 K8 on enclosed inquiry slip ▲



here today...

Portable workbench can be rolled to work location by one man. Doors can be locked to fully protect all contents. Unit is all-welded 1/8-inch and 3/16-inch steel plate construction . . . and can support up to 2000-pounds safely. Heavy-duty roller bearing wheels (hard rubber or phenolic resin) are furnished. Foot-operated locking mechanism securely positions workbench.

Standard "Roll-A-Bench" weighs 325-pounds and is 34-inches high, 41-inches long and 26-inches wide. Other sizes are available to meet individual requirements. *Write* today for literature.

there tomorrow!

Overbeke-Kain

MOBILE WORKBENCH

Several territories available for qualified manufacturer's representatives or distributors. Write today for information.

6755-OK

THE OVERBEKE-KAIN COMPANY
20979 Aurora Road • Bedford, Ohio

Overbeke-Kain

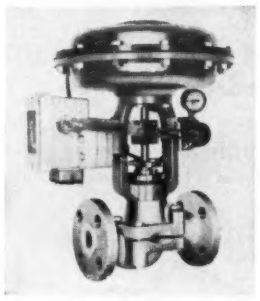
▲ For more details circle NED-333 K8 on enclosed inquiry slip ▲

SPRAY ORIFICE TIPS
feature tungsten carbide inserts

Tungsten carbide inserts in these flat atomizing orifice tips afford high resistance to solutions containing abrasive particles. Tips are designed for airless paint spraying as well as other high pressure industrial spraying operations. They are supplied in three sizes which produce spray angles of 40, 50, and 65 degrees, respectively. Made by Spraying Systems Co., 3211 Randolph St., Bellwood, Ill.

▲ For more details circle NED-334 K8 on enclosed inquiry slip ▲

DIAPHRAGM CONTROL VALVE
split body sizes from 1 to 6 in.



Springless diaphragm motor design of Type 1000 control valve eliminates all friction in the motor and requires less air pressure to operate than piston type springless motors. It supplies substantial force to valve stem itself, making it suitable for single seated construction. Split body is available in steel, stainless steel, Monel, and Hastelloy C in sizes of 1 through 6 in. It provides streamline flow passage and eliminates erratic pressure variations in flow stream. Design is suitable for high pressure drops, flashing service, chemicals, and slurry applications. Made by **Uniflow Valve Corp.**, 21 Quine St., Cranford, N. J.

▲ For more details circle NED-335 K8 on enclosed inquiry slip ▲

PULLING-LIFTING TOOL
in double and single reel models

Wide range of pulling, lifting, or lowering jobs can be done with the Multi - Pul heavy - duty power tool which is load rated at 6000 lb. It is made in S-100 single reel and T-100 double reel models and has self-equalizing brakes and Oilite bearings. Lockout cam on Model T-100 allows use of either or both reels. Typical functions are as a hoist, winch, tackle, jib crane, car puller, machinery mover, cargo tie-down, hand power derrick, coil or pipe stock lifter, and cable stretcher. Frame and reels are made of Almag No. 35, hooks are alloy steel, and cable is a preformed high fatigue aircraft type. Made by **Indus Corp.**, 1819 Madison Ave., Indianapolis 25, Ind.

▲ For more details circle NED-336 K8 on enclosed inquiry slip ▲

REPLACE YOUR CONVEYOR BELTS BY PHONE!

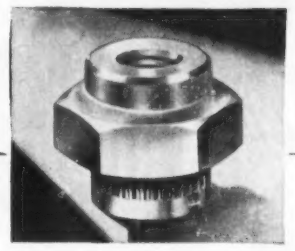
In nation-wide stock for immediate delivery are H-R conveyor belts in sizes and grades for virtually every service. Orders placed by phone are processed the same day in the H-R warehouse nearest you.

When non-standard belts are needed fast, as a result of a breakdown, Hewitt-Robins can ship special, factory-built belts within one week or less! To order the type and size best suited to your requirements, call your nearest H-R representative. To obtain your copy of Conveyor Belt Catalog No. 141, write Hewitt-Robins, Stamford, Connecticut.

HR HEWITT-ROBINS

CONVEYOR BELTING AND IDLERS . . . POWER TRANSMISSION DRIVES
INDUSTRIAL HOSE . . . VIBRATING CONVEYORS, SCREENS & SHAKEOUTS

▲ For more details circle NED-337 K8 on enclosed inquiry slip ▲



How FLEXLOC Microsize Clinch Nuts improve your product reliability

Drill a hole in any thin-section material, insert the knurled hollow shank of a 1-piece FLEXLOC, clinch it, and you have a permanently anchored self-locking all-metal nut as an integral part of the material. The overall reliability of your product is improved because the FLEXLOC nut will never loosen its grip on the screw even under extremes of vibration, impact or shock. It is not affected by moisture, dryness or oil.

For complete information on FLEXLOC Microsize Clinch Nuts, contact your authorized SPS distributor. Or write Flexloc Locknut Division, STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

We also manufacture precision titanium fasteners / write for free booklet

SPS Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co. • National Machine Products Co. • Nutt-Shell Co. • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle NED-338 K8 on enclosed inquiry slip ▲

Sure way to get a move on

SUPER RIB —All-new, all-purpose tire gives unusual strength and stamina in industrial service

HARD ROCK LUG —For industrial, mine and lumber service—where snags and cuts are a problem

LUG —For industrial, mine or materials handling service, where deep, nondirectional traction is required

RIB ALL-WEATHER —All-purpose tire with hi-flotation—recommended for wheelbarrows, motor scooters, and materials handling industrial service

STUDDED —For extra traction in soft going, industrial and power-mower service

ALL-WEATHER —For industrial, power-mower, mine service or highway service, where traction is a must

Order these industrial tires from your Goodyear dealer

Hauling heavy loads of steel as a steady diet isn't the softest possible assignment for tires. But these Goodyear Pneumatic Industrials make it look easy. That's because they're built with Goodyear's exclusive Triple-Tempered 3-T Cord, to provide unbeatable resistance to heat, impact and bruising. On the tough jobs—or any job—you'll find they far outwear ordinary tires. Next time you order new equipment or new tires, specify performance-proved Goodyear Pneumatics—the best industrial tires money can buy.

Goodyear, Industrial Tire Sales, Akron 16, Ohio

All-Weather—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

Use the Right Tire for the Job—Buy and Specify

GOODYEAR INDUSTRIAL TIRES

More tons are hauled on Goodyear Truck Tires than on any other kind

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SOLVE "TOUGH" PARTS PROBLEMS WITH Colonial's SILICONE RUBBER

There's practically no end to the usefulness of silicone rubber as a material for making rubber parts. It won't melt or harden at 500 deg. F., won't conduct electricity, is not affected by sun, water or weather, and even dry ice can't freeze it. These and many other desirable properties which can be obtained through Colonial's expert compounding, make silicone rubber the most likely material for solving your "tough" parts problems.

Whether you are designing new products, or improving existing ones, contact Colonial Rubber Company for details on the advantages of fabricating more efficiently and *profitably* with silicone rubber. Our service is complete . . . you can call on us for any one or all three of the following:

EXPERT COMPOUNDING
ACCURATE PRODUCTION
QUICK DELIVERY

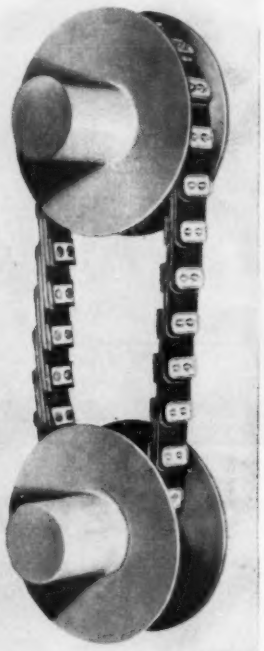
1967

COLONIAL RUBBER CO.
RAVENNA, OHIO

For more details circle NED-340 K8 on enclosed inquiry slip

NEW!

MANHEIM VARIABLE SPEED BELT



Now outdates wood block and variable speed v-belts

Replaces Enclosed Drive Belts without Disassembly

MVS Belt sets a new standard in V-to-V drives because it is adjustable to any length and is installed in minutes instead of hours. Its patented design eliminates drive disassembly. MVS Belt is placed around the sheaves and coupled with T-screws. Uniform thickness and width guarantee constant power delivery at all speeds with no cross-sectional distortion. Available in 26 widths from 1½" thru 5".

- REDUCES DOWN-TIME FROM HOURS TO MINUTES
- ADJUSTABLE TO ANY LENGTH
- EXACT SPEED CONTROL
- UP TO 90% LESS VIBRATION

Write Today for Complete Information.

MVS

MANHEIM MANUFACTURING & BELTING COMPANY
Manheim 4, Penna.

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For more details circle NED-341 K8 on enclosed inquiry slip

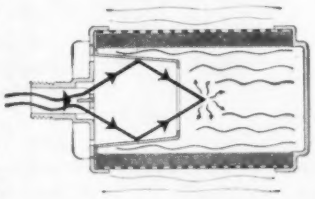
SPRAY PAINTING OUTFIT is portable and easy to use

Particularly suited for maintenance work, this Steadi-Grip portable spray painting outfit will handle all types of lacquers, enamels, multicolor finishes, and house paints. The 2-qt pressure cup is separated from the gun to give complete freedom of movement. Paint drip is eliminated. Separate air and material regulators assure accurate settings to give good coverage without runs, sags, or dusty finishes. Made by **Binks Mfg. Co.**, Dept. NED, 3122 Carroll Ave., Chicago 12, Ill.

For more details circle NED-342 K8 on enclosed inquiry slip

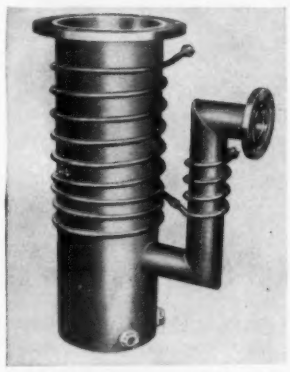
AIR NOISE SILENCER muffles air-actuated devices

Irritating noise resulting from air-operated equipment and devices is silenced with this M-Series Atomuffler. Attached to the exhaust of pneumatic tools and other air powered units, this muffler diffuses the escaping air at a ratio of 60 to 1. It will thus accommodate the full air flow. It is available in sizes to fit most exhaust ports. Made by **Allied Witan Co.**, Dept. NED, 12500 Bellaire Rd., Cleveland 35, Ohio.



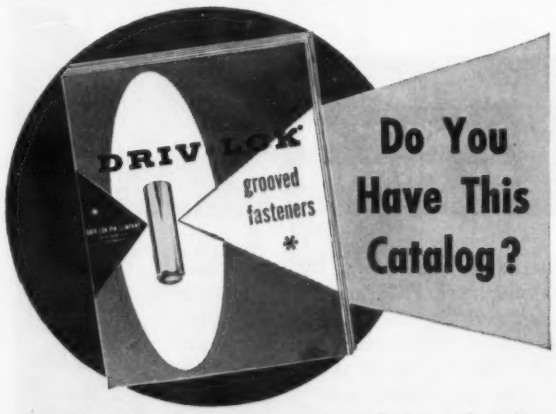
For more details circle NED-343 K8 on enclosed inquiry slip

DIFFUSION PUMP high speed, low backstreaming unit



Pumping speed of the Type EP4W fractionating oil diffusion pump is 420 liters per second at 5 x 10^{-5} mm Hg and backstreaming is 0.04 cc per hour at 25° C. Its extra high limiting forepressure tolerance of 525 microns at 5 x 10^{-5} mm Hg gives it good booster action. The three-stage pump has a streamlined, self-aligning jet assembly with no screw heads exposed to the vapor stream, minimizing oil decomposition. Body, flanges, and cooling coils are stainlesss steel. Entire assembly is Nicrobrazed, giving joints the properties of stainless steel. Made by **Veeco Vacuum Corp.**, 86-P Denton Ave., New Hyde Park, L. I., N. Y.

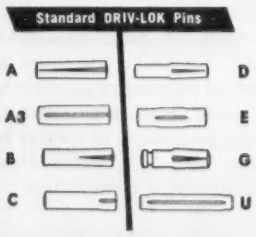
For more details circle NED-344 K8 on enclosed inquiry slip



Do You Have This Catalog?

Contains Complete details on grooved pins and studs
YOURS FOR THE ASKING!

Write for your copy of the DRIV-LOK catalog today. Contains factual data in concise, easy to use form. Illustrated with typical applications that may help solve a fastening problem for you. Sent without obligation, of course.



DRIV-LOK SALES CORPORATION
717 Park Avenue • Sycamore, Illinois

For more details circle NED-345 K8 on enclosed inquiry slip

AUTOMATIC VOLTAGE REGULATOR for CONSTANT A-C Line Voltage

- ★ Handles Any Load Up To 6 KVA
- ★ Accuracy Is ±0.25%, Independent of Load
- ★ Speed of Correction 10 Volts per Second
- ★ Output Voltage Adjustable ±10%
- ★ Input Voltage Range ±10%
- ★ Efficiency 98%
- ★ No Power-Factor Restrictions
- ★ Weighs and Costs Less Than Any Other Type per KVA
- ★ Eight Different Models for Table, Relay Rack or Wall Use and for 115- or 230-Volt Circuits and 50 or 60 Cycles. Unit Prices from $490. Militarized Models Available.

Write for Automatic Voltage Regulator Bulletin

GENERAL RADIO Company

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In CANADA: 99 Floral Parkway, TORONTO 15

For more details circle NED-346 K8 on enclosed inquiry slip

STYLE AND SIZES FOR ALL MACHINES ON WHICH THREADS ARE CUT

On Brown and Sharpe, and other automatics

INSERT CHASERS SAVE UP TO 33%

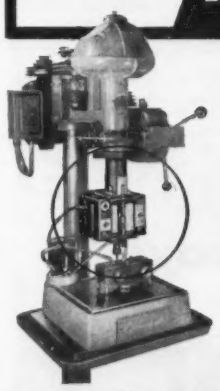
Insert chasers are like safety razor blades: they cost so little that you can throw them away when dull. Or, for utmost economy, you can resharpen them over and over again. Only a flash grind is required. For less than $50 you get a dozen sets of ¾—16 insert chasers, each set ground ready to go. You will be amazed at the quantity of threads they will cut, even to Class 3 specifications, with a minimum of downtime.

FREE: "UNIFIED AND AMERICAN SCREW THREAD DIGEST"

THE EASTERN MACHINE SCREW CORP., 28-48 Barclay St., New Haven, Conn.

For more details circle NED-347 K8 on enclosed inquiry slip

TIPS for PROFITABLE TAPPING — Commander LĒAD-MATIC TAPPER



High Production Automatic Lead Screw Tapper

Put a Commander Lēad-Matic Tapper on *any* drill press and you're ready to handle any tapping job — precision or otherwise. Designed to handle a very wide range of taps, Lēad-Matic operation is simple and foolproof — even inexperienced operators produce precision threads. The Lēad-Matic's electrically controlled cycle or jog tapping actions provide versatility to handle any job. Ruggedly built for trouble-free service.

Features That Help You Tap Better

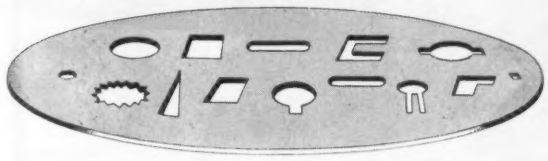
- Precision ground lead screws insure finest threads.
- Automatic tap reversal—no drill press motor reversing—faster work.
- Hand, foot or fixture switch controls.

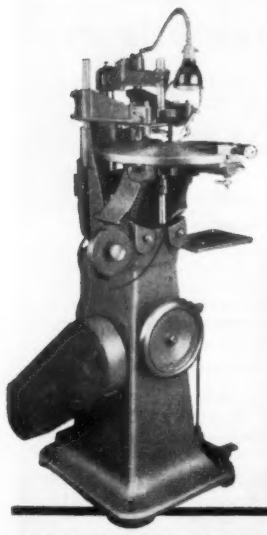
Your nearby Commander Distributor has the Lēad-Matic see it soon.

Commander MFG. CO.
4220 W. KINZIE ST., CHICAGO 24, ILLINOIS

For more details circle NED-348 K8 on enclosed inquiry slip

FOR CONTOURS LIKE THESE . . .



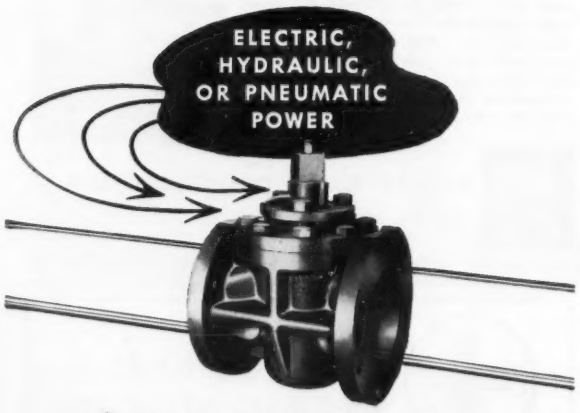


Freak contours – more conventional shapes – internal or external forms. In any case, you'll save valuable time by producing the job on an Oliver of Adrian contour sawing and filing machine.

Parts for jigs and fixtures, dies, gages, templates and special machine production can be shaped to dimension faster – easier – at less cost. No hand filing or semi-finishing operations. Better investigate Oliver today. Just write. Available in five sizes – bench or pedestal.

▲ For more details circle **NED-349 K8** on enclosed inquiry slip ▲

ROCKWELL-Nordstrom VALVES CUT POWER OPERATION COSTS



1. Rockwell-Nordstrom valves cut power operation costs two ways:

Rockwell-Nordstrom valves require simpler, less costly operators because the *lubricated* plug is moved through only 90° for closure.

2. The pressurized lubricant that assures leak-proof, positive shut-off also prevents metal-to-metal friction . . . the chief cause of valve wear. This means longer valve life and greatly reduced maintenance and down time costs.

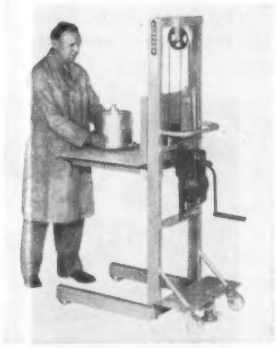
Rockwell-Nordstrom valves are available in "package" units with a variety of electric, pneumatic or hydraulic actuators to meet your automatic valve needs. Rockwell-Nordstrom, the world's most complete line of lubricated plug valves, cost no more to buy—often less—than ordinary valves. Rockwell Manufacturing Company, Pittsburgh 8, Pa. Canadian Valve Licensee: Peacock Brothers Limited.

For details, just circle No. 350 on the reply card in this magazine.

ROCKWELL-Nordstrom VALVES
it's ROCKWELL
MANUFACTURING COMPANY

▲ For more details circle **NED-350 K8** on enclosed inquiry slip ▲

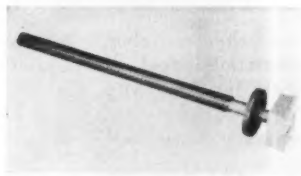
PLATFORM LIFT
manual model has 750-lb capacity



Capacity loads of the improved Type D, Mark II Shoplifter, increased from 500 to 750 lb, can be handled safely anywhere on its 24 in. square platform. The one-piece steel platform is equipped with a backguard and raises to 54 in. Features include slipproof twin dogs for balanced load security, top sheave cable guard, hoist drum cable wraps, and a foot-operated floor lock. Price is $195. Made by **Economy Engineering Co.**, 4509 W. Lake St., Chicago 24, Ill.

▲ For more details circle **NED-351 K8** on enclosed inquiry slip ▲

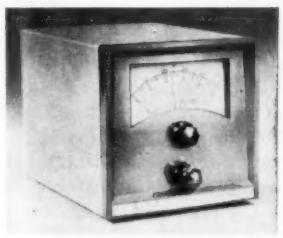
OIL IMMERSION HEATER
operates on 240, 480, or 550 v ac



High electrical input in a short length is possible in this oil immersion heater because of the longitudinal finned tube design. Tubing is welded to a 3-in., 300-lb steel flange. Resistance heating elements are inserted in refractories and packed in additional powdered refractory to assure maximum heat transfer up to 600° F. Heater has a 6-in. square outlet box and is available for use on 240, 480, and 550-v 3-phase, 60-cycle ac. Made by **Trent, Inc.**, Dept. N, 211 Leverington Ave., Philadelphia 27, Pa.

▲ For more details circle **NED-352 K8** on enclosed inquiry slip ▲

OVERSPEED CONTROL
monitors gasoline engines under test



Engine alteration is not needed for installation of this overspeed control for monitoring standard 6 or 8-cylinder, 6 or 12-v gasoline engines under test. Connected directly to ignition system, control is ready to operate after two wires are attached across the coil. Normally, dial has dual scales of 0 to 1000 rpm and 0 to 5000 rpm. Special ranges can be ordered. One pointer is set to desired limit of speed, while another pointer indicates actual running speed. When the two pointers meet, circuits are closed that either sound an alarm, or shut down the system. The 6½ x 6½ x 10-in. control can be table or panel mounted. It operates on 115/230 v ac. Made by **Assembly Products, Inc.**, Chesterland 61, Ohio.

▲ For more details circle **NED-353 K8** on enclosed inquiry slip ▲

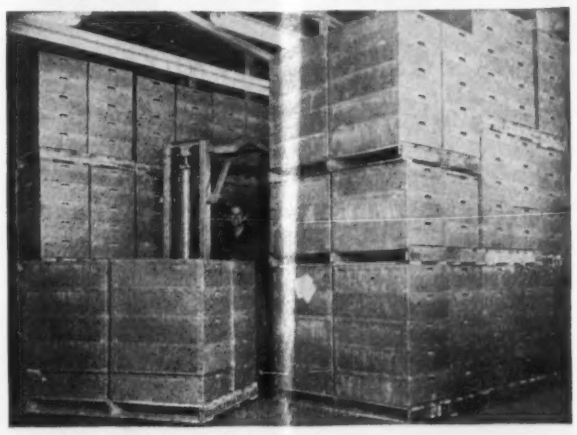
LOOKING FOR WAYS TO CUT COSTS?

CONVOY'S CHEMBOARD* SELF-STACKING TOTE BOXES *MAY BE YOUR ANSWER*

Convoy Boxes are LOW COST, STRONG and LIGHT WEIGHT . . . are made in a wide range of stock sizes and shapes. They weigh and cost less than 40% of steel.

*Chem-Board is Convoy's chemically impregnated corrugated board . . . flint-hard, rock-strong.

Here's an example of Convoy Self-Stacking Boxes speeding production, conserving space, saving money.



GET IN TOUCH WITH
CONVOY, INC.
CANTON 6, OHIO
P. O. Station B, Box 216-N

STANDARD AND CUSTOM-MADE NESTING, STACKING, and VERTICAL-SIDED CHEM-BOARD TOTE BOXES

▲ For more details circle **NED-354 K8** on enclosed inquiry slip ▲

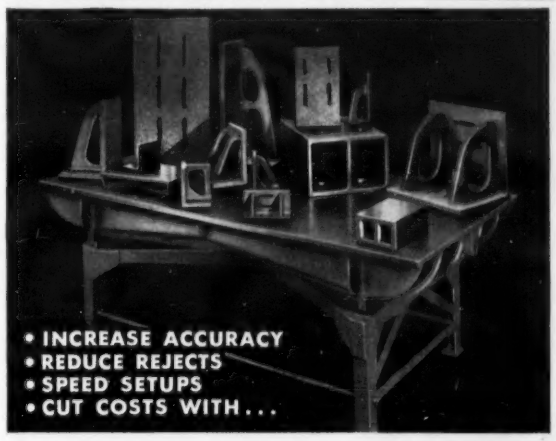
YOUR BEST MOVE IS TO MOVE WITH
MERRILL
MATERIAL HANDLING DEVICES

For Interesting Information write

MERRILL BROTHERS
56-13 Arnold Ave., Maspeth, N. Y.

3-R-5

▲ For more details circle **NED-355 K8** on enclosed inquiry slip ▲



MACHINE PRODUCTS PRECISION EQUIPMENT

You'll hold closer tolerances and increase efficiency, too, when you use Machine Products precision surfaces. Because the combination of superior materials, skilled craftsmanship and rigid quality controls in the manufacture of Machine Products equipment assures you of the precise dimensional accuracies you require. A complete line of plates and accessories is available, so send for your free catalog today.

MACHINE PRODUCTS CORPORATION
6771 E. McNichols Rd. • Detroit 12, Michigan

▲ For more details circle **NED-356 K8** on enclosed inquiry slip ▲

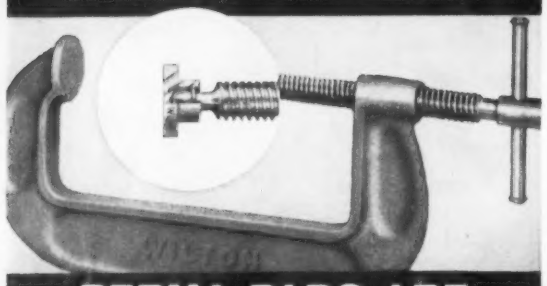
• Just off the press is your FREE copy of the big new 48-page CESCO catalog. More than a catalog, this publication is a helpful guide for choosing the right safety protective equipment to meet your particular requirements. For example, there's a detailed chart listing the recommended safety equipment to use for 17 basic classifications of industrial hazards. In addition, there's a complete description and illustration of all the items in the CESCO line.

• You can get your FREE copy of the New CESCO catalog either of two ways—by contacting the CESCO distributor nearest you or by writing us direct. Get your copy today.

CHICAGO EYE SHIELD COMPANY
2715 W. Roscoe St., Chicago 18, Illinois

▲ For more details circle **NED-357 K8** on enclosed inquiry slip ▲

STOP C-CLAMP SWIVEL PAD LOSS!



PERMA PADS ARE GUARANTEED *NEVER* TO COME OFF!

Get Perma Pads Plus All These Features With Wilton C-Clamps!

Drop Forged Steel Or New Ductile Alloy • Extra Deep Or Standard Throat • Rapid Or Conventional Action • Copper Or Cadmium Plated Spindles • Every C-Clamp Individually Boxed

Attach this ad to your letterhead and mail today for FREE literature!

WILTON

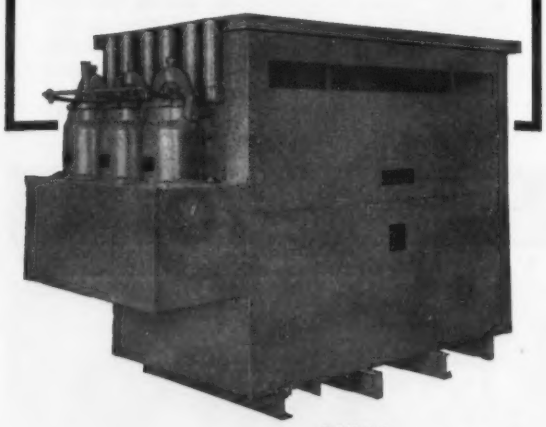
WILTON TOOL MFG. CO., INC., DEPT. MF-58, SCHILLER PARK, ILL.

NED 108 Sold by leading distributors the world over.

▲ For more details circle NED-358 K8 on enclosed inquiry slip ▲

WE BUILD *TRANSFORMERS* TO YOUR *SPECIFICATIONS*

• More Acme Electric transformers, than ever before are being constructed with special specifications for research, laboratory, experimental or processing methods. The wealth of experience that our engineers have gained in the building of "Special Transformers" can be put to advantage, cooperating in designing and constructing transformers to your special specifications. Send complete details for quotation.



T-33200-8
200 KVA, 3 phase, 60 cycle; Primary: 4160 volts, delta ±2½% FC taps.
Secondary: 208Y/120 volts, 200 amp. 5 KV, gang operated oil fuse cutouts.

T-13769
1 KVA, single phase, 7 to 60 cycles.
Primary: 110 volts at 60 cycles with taps starting at 7 cycles, 12.8 volts in increments of voltage and frequency to 60 cycles.
Secondary: 33,000 volts.

ACME ELECTRIC CORPORATION
3010 WATER STREET • CUBA, NEW YORK

Acme ALME Electric TRANSFORMERS

▲ For more details circle NED-359 K8 on enclosed inquiry slip ▲

PORTABLE SPACE HEATER is oil fired and has thermostat

Workers are kept warm and at top efficiency with this portable space heater which has an integral thermostatic control. Oil-fired unit is usable indoors and

out, and is also adaptable for thawing frozen equipment and material. Six sizes are available with outputs from 100,000 to 1,000,000 Btu per hr. It plugs into any electric outlet and is readily moved on easy-rolling wheels. Features include automatic electric ignition, electric powered fans with deliveries of 600 to 7000 cfm, enclosed combustion chamber, odorless and fumeless operation, automatic air-fuel control, and low-fuel safety cut-off. Made by **Stow Mfg. Co.**, 26 Shear St., Binghamton, N. Y.

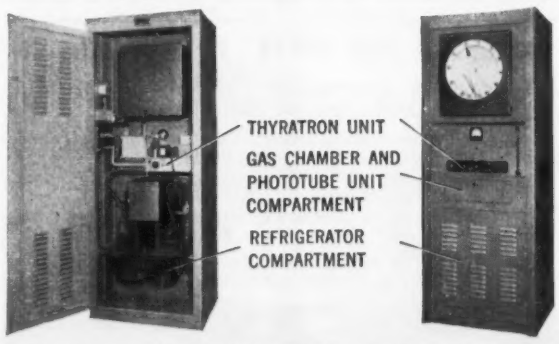
▲ For more details circle NED-360 K8 on enclosed inquiry slip ▲

DEEP HOLE DRILLING MACHINE drills 0.187 to 0.750-in. holes at spindle speeds from 2000-8000 rpm

Concentricity, squareness, finish, and size of drilled hole are held to critical tolerances by this automatic Standard gun drilling machine on all types of metals. Machine will handle two parts simultaneously and will drill holes with 0.187 to 0.750-in. diameters at spindle speeds from 2000 to 8000 rpm. Feed rate varies from 0.0001 to 0.010 in. per rev, and feed stroke is adjustable from 1 to 12 in.

Cutting tool is driven by a torque drive adapter, and a contact switch protects tool from breakage. Under excessive torque, torque drive rotates to contact switch which then takes cutting tool out of feed and rapid-returns it to back position. It also stops spindle and cuts off oil supply. Cutting oil delivered to spindle rear under 75 to 1500 psi pressure serves both as coolant and chip flusher. Made by **Crescent Tool & Machine Co.**, 25127 W. Outer Dr., Melvindale, Mich.

▲ For more details circle NED-361 K8 on enclosed inquiry slip ▲



NOW...CONTINUOUS, AUTOMATIC ACCURATE MONITORING OF GAS MOISTURE CONTENT... with the W-C DEWPOINT RECORDER

Here, in one unit, is a complete system that accurately measures, indicates and records gas moisture content . . . even in the low dewpoint range . . . down to —90°F. It can operate with continuous gas sampling or sequential sampling . . . does not require purging. Available with either round or strip chart recording, the W-C Dewpoint Recorder can be equipped with any standard electric or pneumatic control . . . can perform such functions as on-off switching, proportioning, alarm signaling of off-normal condition.

The W-C Dewpoint Indicator is a compact, portable unit. Write for Bulletin DPI-4.

For complete details and specifications, write today for Bulletin DPR-5.

WEIGHING & CONTROL COMPONENTS, INC.
S.A. 1799 206-L Lincoln Avenue, Hatboro, Pa.

▲ For more details circle NED-362 K8 on enclosed inquiry slip ▲

The Standard of Excellence!

■ For design, utility, and service you can't beat VACO. The Comfordome handle and oil tempered chrome vanadium steel blade assure maximum convenience at low cost. The VACO name and unconditional guarantee assure finest workmanship.

Look for the VACO Vari-Board! Next time you need a screw driver, fit the driver to the screw by making your selection from a VACO Vari-Board. Your choice of up to 120 screw drivers at a glance!

NEW! VACO PLIERS! Now available in all popular styles and sizes. Made to VACO quality specifications.

VACO PRODUCTS COMPANY, 317 E. Ontario St., Chicago 11, Ill.
In Canada: Vaco-Lynn Products, Ltd., Montreal 1, Quebec

▲ For more details circle NED-363 K8 on enclosed inquiry slip ▲

If you're serious about economizing, start here

The company below saved $4,000 annually on maintenance by switching from powdered soap to SBS-60 Cream Deodorant soap.

Waste soap is not the only needless expense in washrooms. Waste *maintenance* is even more costly. The company in the picture at right saved some $4,000 a year in maintenance men's time by switching to SBS-60, the cream-type cleanser. How did SBS-60 accomplish this? Easy! One SBS-60 dispenser replaces six or more conventional powdered-soap dispensers. And the SBS-60 dispenser need be filled as little as once every three days, opposed to as often as three times daily for powders. If you really want to cut costs, write for details to dept. 58-J6.

sugar beet products co.
SAGINAW, MICHIGAN
CANADA: Chemical By-Products, Ltd., Rexdale, Toronto, Ont.

▲ For more details circle NED-364 K8 on enclosed inquiry slip ▲

WIL-GARD

Why Balanced-Formula Neoprene

ASSURES BETTER HAND PROTECTION

New Wil-Gard Balanced-Formula Process keeps all vital protective features in balance! Better resistance to scores of industrial solutions and solvents. Longer-lasting toughness and durability. Stay-on comfort and flexibility.

PROTECTION FOR THE HANDS OF INDUSTRY • SINCE 1916

WIL-GARD

THE WILSON RUBBER COMPANY INDUSTRIAL DIVISION CANTON 8, OHIO
A Division of Becton, Dickinson and Company WR-158-27-C

▲ For more details circle NED-365 K8 on enclosed inquiry slip ▲

SAFETY

GRIP-STRUT

Patented

STAIR TREADS

for greater safety • for greater economy

Use Safety GRIP-STRUT stair treads throughout your plant, on your manufactured products for greater anti-skid protection. All one piece of material with open area in excess of 55% total area, easy to flush clean, greater strength with less weight, in steel or aluminum.

Available at Globe Distributors in all principal cities. Consult yellow pages in your phone book under "stair treads."

PRODUCTS DIVISION

THE GLOBE COMPANY

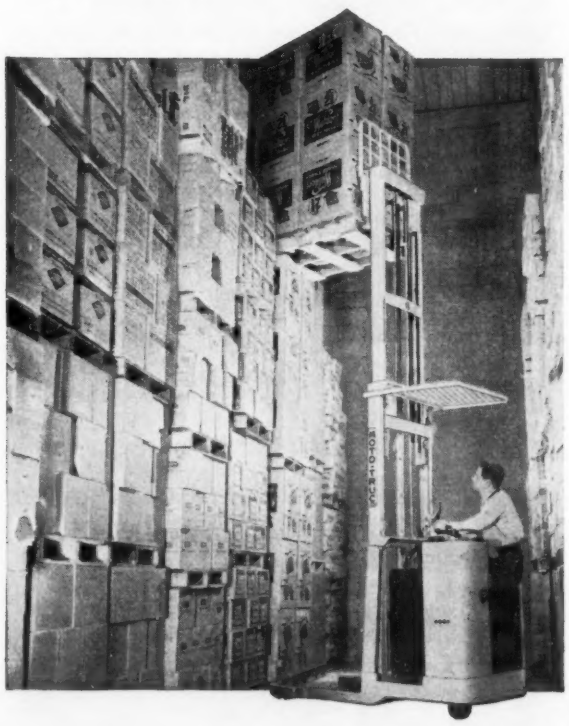
4002 S. PRINCETON AVE. • CHICAGO 9, ILL.

▲ For more details circle NED-366 K8 on enclosed inquiry slip ▲

Whatever the Load . . .

MOTO-TRUC

Stacks MORE in Less Space



Sturdy Straddle Trucks For Ceiling-High Stacking in 6-Foot Aisles

■ Rugged "Ride-A-Man" straddle trucks, built by MOTO-TRUC permit fast stacking of 48"-long loads from 6-foot aisles. Equipped with famous Magic Circle Steering, turns of more than 90° are possible without tire scrubbing. At the same time, this unique steering arrangement provides solid, four-wheel support that assures outstanding stacking stability even when loads are fully elevated.

Although built small for maximum maneuverability, MOTO-TRUCs can take it. One look will prove that their *rugged simplicity* will keep them on the job longer at lower cost! Investigate the space-saving features of MOTO-TRUC straddle trucks today!

A Complete Line — "Ride-A-Man" straddle trucks are built in capacities to 4000 lbs. with standard lifts to 130", higher for special applications. MOTO-TRUC also builds a complete line of "walkie" type straddle trucks.

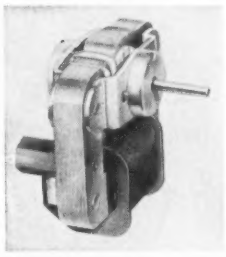
Write for Free Catalogs

Designers and Manufacturers of Walkie and Small Rider Type Trucks

The MOTO-TRUC Co. **1961 East 59th St. Cleveland 3, Ohio**

▲ For more details circle NED-367 K8 on enclosed inquiry slip ▲

SMALL AC MOTORS
ratings to 0.006 hp at 2400 rpm



Improvements made in Type A small unidirectional nonreversed alternating current motors have made them more efficient with no size increase. Usable where space and size are critical, they afford low noise, high torque, and long life. Reroll chart drives, 2 to 4-in. fans, stirrers, and gear train drives are applications. Variations in mounting and rotation are available. Ratings up to 0.001 hp at 1900 rpm with a 5/16-in. stator are offered. Model with 15/16-in. stator develops up to 1/150 hp at 2400 rpm. Made by **Barber-Colman Co.**, Small Motors Div., Dept. NED, 1200 Rock St., Rockford, Ill.

▲ For more details circle NED-368 K8 on enclosed inquiry slip ▲

SPEED INDICATOR
range is 100 to 12,000 rpm

Indication of speed for almost anything that moves is provided by this packaged speed indicating system. It combines an accurate 4-in. panel-mounted meter with a tachometer-generator to give full speed indications from 100 to 12,000 rpm. Meter can be mounted remotely up to 500 ft from self-powered generator mounted on equipment. Price is $87. Made by **Servo-Tek Products Co.**, Dept. ED, 1086 Goffle Rd., Hawthorne, N. J.

▲ For more details circle NED-369 K8 on enclosed inquiry slip ▲

AC-DC VOLTMETER
measures voltages and resistances

Model R-2 AC-DC Voltmeter measures alternating current (10 cps to 1 mc) and plus or minus direct current voltages from 1 mv to 1000 v in 14 ranges and resistances from 10 ohms to 10 megohms midscale in seven ranges. Accuracy is within 2 per cent on all functions. The "DC distend" feature allows the upper 10 or 1 per cent of any direct current range to be expanded to cover the full meter movement for critical examination. Also incorporated are a self-contained standard cell and automatic zero adjustment. The meter is illuminated. An optional adaptor panel converts the instrument for rack-mounted use. Made by **Southwestern Industrial Electronics Co.**, Dept. NE-P2, 2831 S. Post Oak Rd., Houston 19, Tex.

▲ For more details circle NED-370 K8 on enclosed inquiry slip ▲

EXCLUSIVE DESIGN

bends HARD and soft tubing

IMPERIAL combination benders for 2 to 7 sizes now in famous Blue Dot design

Exclusive Imperial design lets you bend 'em all: hard-drawn copper . . . soft copper . . . steel . . . aluminum . . . stainless steel tubing. You make neater bends . . . faster . . . with Blue Dot benders — and you make *accurate* bends, too, because they're calibrated! Long handles provide good leverage. Wide range of Imperial Blue Dot benders includes **Individual, 2-in-1** and **Combination** types.

IMPERIAL WIDE-RANGE TUBE BENDERS

Bends any angle to 180°. Adapt to sizes by changing forming-wheel and block. Furnished in roomy steel chest.

No. 260-FH bends 7 sizes: ¼ to ⅞" O.D. (⅛ to ¾" nom.). Price each **$77.00.**

No. 350-FH bends 6 sizes: ¼ to ¾" O.D. (⅛ to ⅝" nom.). Price each **$65.00.**

No. 360-FH bends 4 sizes: ⅜ to ¾" O.D. (¼ to ⅝" mon.). Price each **$53.00.**

Order from your wholesaler. Ask for Bulletin No. 3078.

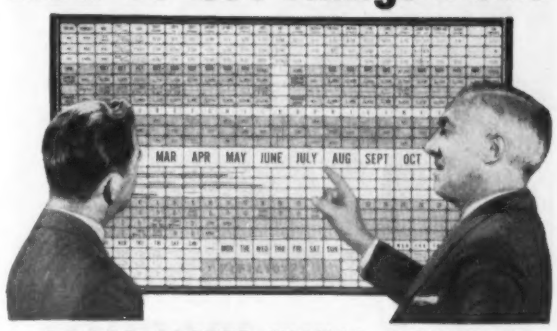
THE IMPERIAL BRASS MFG. CO. • 6300 W. Howard Street Chicago 48, Ill., Dept. NED-108

In Canada: 18 Hook St., Toronto, Ontario

IMPERIAL

▲ For more details circle NED-371 K8 on enclosed inquiry slip ▲

How To Get Things Done



BOARDMASTER VISUAL CONTROL

Gives you a Graphic Picture of your operations, spotlighted in color. You See what is happening at a glance. Facts at eye level—saves you time, prevents errors.

Simple, flexible—easily adapted to your needs. Easy to operate. Type or write on interchangeable cards, snap in grooves. Ideal for production, scheduling, sales, traffic, inventory, etc. Made of metal. Compact, attractive.

Complete Price $49.50 Including Cards

FREE **24-Page Illustrated Booklet N-400 Mailed Without Obligation**

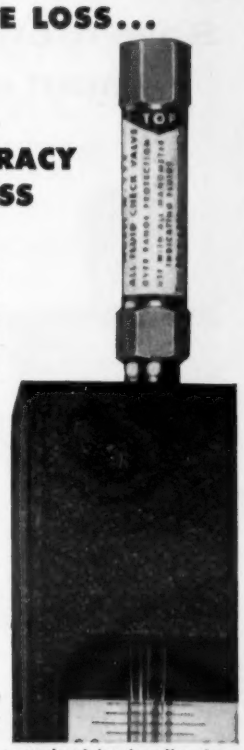
GRAPHIC SYSTEMS 55 WEST 42ND STREET NEW YORK 36, N. Y.

▲ For more details circle NED-372 K8 on enclosed inquiry slip ▲

NEW-TYPE CHECK VALVE PROTECTS AGAINST OVERRANGE LOSS...

of any manometric fluid

DOES NOT AFFECT INSTRUMENT ACCURACY OR RESPONSIVENESS



Based on a new design principle, the Meriam M-224 Float Check Valve effectively prevents loss of manometer indicating fluid due to overrange, either sudden or creeping. It is small and compact enough for mounting on multiple-tube units, will handle any manometric fluid.

Tested for more than 20,000 cycles without a single failure, the valve will not cause "air block" or affect manometer accuracy. Rugged, corrosion-resistant construction throughout assures long-life serviceability.

In the lab or on the process line, the M-224 Float Check Valve is an essential accessory for all critical manometer applications.

WRITE FOR BULLETIN A-10

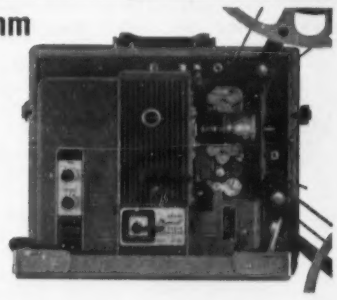
The MERIAM Instrument Co.

10920 Madison Ave., Cleveland 2, Ohio

B.A. 1776

▲ For more details circle NED-373 K8 on enclosed inquiry slip ▲

SHOW YOUR 16mm SOUND MOVIES on this LOW-COST PROJECTOR



Now, for little more than the cost of a good *silent* projector you can get the new, low-cost Kodak Pageant *Sound* Projector, Model AV-085. Lists for only $439.00.*

Powerful 8-watt amplifier is designed around modern printed circuits that make it more compact, rugged, easy to service. 11-inch oval speaker is housed in a baffled enclosure for good response over the entire frequency range.

Super-40 Shutter and 750- or 1000-watt lamp capacity provide extra screen brilliance. Model AV-085 has new Pageant tungsten carbide pulldown tooth that's virtually wearproof. New 3-wire power cord meets all municipal electrical codes, adapts for ungrounded outlets, too.

You *never* oil this new Pageant (or any other Pageant)! It's lubricated for life at the factory. Setups are fast, easy. Reel arms fold down with belts attached, ready to run. Film path is printed on machine, simple to follow.

FREE BOOKLET, Bulletin V3-22, gives full details. Write for it.

**List price, subject to change without notice.*

EASTMAN KODAK COMPANY

Rochester 4, N. Y.

Kodak

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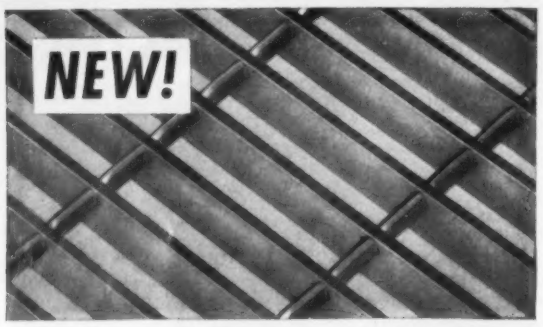


Gary Galok* SUPER ALUMINUM GRATING

First improvement in rectangular mesh grating in over a quarter-century!

- High strength-to-weight ratio.
- Cross bars can't turn, come loose or fall out.
- All sizes—3/4" x 1/8" to 2 1/4" x 3/16".
- Standard mesh with main bars on 1-3/16" centers and close mesh with main bars on .915 centers with cross bars on 4" or 2" centers.
- Safe, slip-proof surface.
- Available in plain or serrated main bars.

You'll want full details about this new aluminum grating Write for Bulletin N-108

*Patents Pending

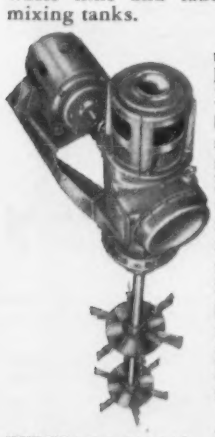
ROCKWELL-STANDARD CORPORATION
GRATING DIVISION
4045 E. Seventh Ave., Gary, Indiana

▲ For more details circle NED-375 K8 on enclosed inquiry slip ▲

Save money...mix fluids without special tanks

Make any open container a mixing vessel . . . with a LIGHTNIN Portable Mixer

Take this short cut to more profitable production! Don't waste time and labor transferring fluids to special mixing tanks.



Power-mix them right where they are—in can, drum, pail, or kettle—with a LIGHTNIN Portable Mixer.

Fast, thorough. Just clamp the right size LIGHTNIN in place and flip a switch. Stir paint, chemicals, glaze. Dissolve fine powders, mix heavy slurries. Keep products from burning while heating. Powerful LIGHTNIN propeller stream *tumbles* and *rotates* the batch for complete uniformity, usually in a few seconds.

No risk. Your mixing results are unconditionally guaranteed when you mix with LIGHTNINS. Thousands are in use, many 25 years and more.

Thirty portable models to choose from. All have ball-bearing motor; quickly removable true-running shaft; instant locking in any position. Sizes 1/8 to 3 HP. For full details, request 28-page illustrated Catalog B-108.

HOW BIG is the mixing job? There's a LIGHTNIN to handle it! Permanent-mounting models for open or closed tanks up to 6 million gallons. Sizes 1/4 to 500 HP. Send for descriptive Catalog B-109.

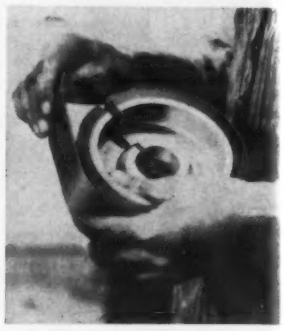
Lightnin® Mixers

MIXCO fluid mixing specialists

MIXING EQUIPMENT Co., Inc., 165-k Mt. Read Blvd., Rochester 3, N.Y.
In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 19, Ont.

▲ For more details circle NED-376 K8 on enclosed inquiry slip ▲

SPLIT DRUM SANDER
6-in. diameter in 1 to 4-in. widths



Low cost strips of coated abrasives can be effectively used with this Split/Drum sander which is designed to prevent cracking or breaking under high speed operation. Locking cone is a part of the arbor bushing, eliminating the necessity for a backing flange, although one is included. If flange is accidentally left off the assembly, no damage will result as long as wheel is tight against a shoulder on the arbor spindle. The 6-in. diameter size is offered in 1, 1½, 2, 3, and 4-in. widths. Three to 12-in. diameters will be available soon. Made by **Hargreaves Industrial**, Room 215, 120 N.W. Ninth Ave., Portland 9, Oreg.

▲ For more details circle NED-377 K8 on enclosed inquiry slip ▲

LP-GAS TORCH
heats to 2200° F

Powr Blast heavy duty liquefied petroleum torch is equipped with a 16-oz throw-away LP-gas container and can generate over 2200° F. It can be used for 3 to 4-in. size copper tube sweat fitting work, cable slicing, removing paint, brazing, general soldering, and starting charcoal fires. Fuel sells for 98 cents and the torch for $3.98. Made by **Lenk Mfg. Co.**, Dept. 324, Franklin, Ky.

▲ For more details circle NED-378 K8 on enclosed inquiry slip ▲

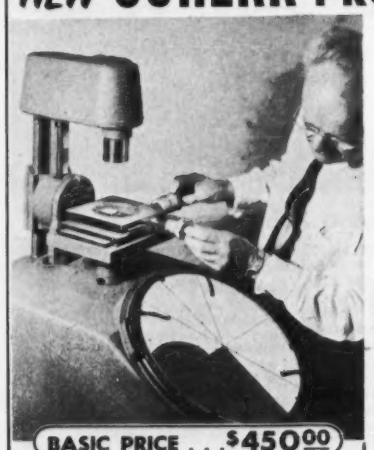
REVOLVING BINS
have removable drawer units

Boltless adjustable dividers used in Universal revolving shop or parts bins slide into slotted hub cylinders, permitting subdivision of each revolving disc into as many as 30 compartments. Removable drawer units have a centering guide to keep the drawers in place. Boltless removable bin fronts may be attached or removed instantly by a pivot catch. Made by **Supreme Steel Equipment Corp.**, Dept. NED, 53rd Street & First Avenue, Brooklyn, N. Y.

▲ For more details circle NED-379 K8 on enclosed inquiry slip ▲

INSPECTION BY PROJECTION

with the NEW SCHERR MICRO PROJECTOR with the VERTICAL DESIGN



NEW IMPROVED Self-Contained MODEL featuring

Rigid Floor Base — eliminating extra charge for table
Tilting Stage for Helix, Angles and Bevels
4" Dia. Stage Opening
14" Diameter Screen
Column Slide adjustable for wear by means of gibs. Will hold square indefinitely.
Custom made Precision Coated Lenses and double condensers for different objectives 10 to 100X magnification.
Surface Illuminator can be added anytime.
An entirely new practical designed tool for Inspection Department and Production Shop.

BASIC PRICE . . . $450.00

SCHERR PRECISION COMPARATOR CHARTS

OVERLAY and REPLACEMENT STANDARD CHARTS are carried in stock.

SPECIAL CHARTS made up to your specifications.

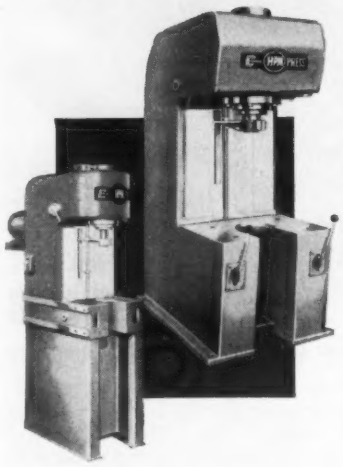
WRITE FOR ILLUSTRATED FOLDER CODE GIUJY

GEO. SCHERR CO., Inc.
COMPLETE LINE OF PRECISION INSTRUMENTS
200-ND LAFAYETTE STREET • NEW YORK 12, N.Y.

▲ For more details circle NED-380 K8 on enclosed inquiry slip ▲

MEET THE NEWEST H-P-Ms

THE VERSATILE H-P-M C-PRESS



The outstanding features of these new H-P-M C-Presses rate them above any comparable presses now available. They are designed for both high-speed automated production and general purpose work.

- 5, 10 and 15 Ton Models
- All models Completely J.I.C.
- 2 Manual—2 Automatic Systems
- All Controls Interchangeable
- Completely New Index Table
- Heavy, Rugged Frames—Minimum Deflection
- Long Stroke—Plenty of Daylight
- Positive Ram Guides
- Complete Line of Standard Accessories

HPM

Catalogs on both the new manual and automatic models now available. Write today, for complete information.

H840

THE HYDRAULIC PRESS MFG. COMPANY
A DIVISION OF KOEHRING COMPANY • MOUNT GILEAD, OHIO, U. S. A.

▲ For more details circle NED-381 K8 on enclosed inquiry slip ▲

higher quality — lower costs

APEX SCREWDRIVING TOOLS

The cost of a screwdriving tool isn't measured by the price of that tool, but by the amount of work it will do for you. The cost of an Apex insert bit, for example, is invariably less than the cost of an ordinary insert bit, simply because an Apex bit will drive so many more screws.

Right now, when every phase of production is being carefully checked for possible economies, it's just good business to look beyond mere price — to actual tool costs. You can start by writing, on your company letterhead please, for the new Apex Screwdriving Tools Catalog.

Apex originated and pioneered the development of the insert bit and holder combination, a major advancement in screwdriving techniques.

1933 • A Quarter Century of Service to Industry • 1958

Ask APEX for the answer to your fastening problem!

THE APEX MACHINE & TOOL COMPANY
1046 S. Patterson Blvd., Dayton 1, Ohio

▲ For more details circle NED-382 K8 on enclosed inquiry slip ▲

Permanently End Condensation Drip, Rust and Corrosion with NoDrip Plastic Coating!

Here is the inexpensive, easy way to solve your condensation problem once and for all. NoDrip plastic coating acts immediately to insulate and protect tanks, pipes, walls, ceilings, air ducts and other metal equipment against condensation drip, rust and corrosion. NoDrip can be applied by anyone without special experience with brush, trowel or spray. NoDrip is also resistant to acid, alkali and brine...protects concrete, brick, plaster, tile, wood or composition surfaces.

32-PAGE NoDrip DATA HANDBOOK

Complete with photographs, charts and technical information to help solve your condensation problem. Write today!

Available at leading plumbing and mill supply houses
J. W. MORTELL COMPANY 526 Burch St., Kankakee, Ill.

▲ For more details circle NED-383 K8 on enclosed inquiry slip ▲

IT'S EASY TO STRIP OFF PAINT and Solve Your Stripping Problems with—

EPOXYSTRIP

PAINT STRIPPER—Saves Time and Money!

A new more powerful paint stripper that outstrips all others! No organic finishes have yet resisted this amazing paint stripper. It was especially formulated to remove epoxies . . . with the same ease that it removes baked enamels, lacquers, etc. No stripping scum—clean rinsing!

- EPOXYSTRIP WILL NOT HARM SOFT METALS
- ECONOMICAL—MORE JOBS PER GALLON AT LOWER COST
- NO SCRUBBING OR MANUAL ASSISTANCE
- RECOMMENDED BY LEADING FINISH MANUFACTURERS

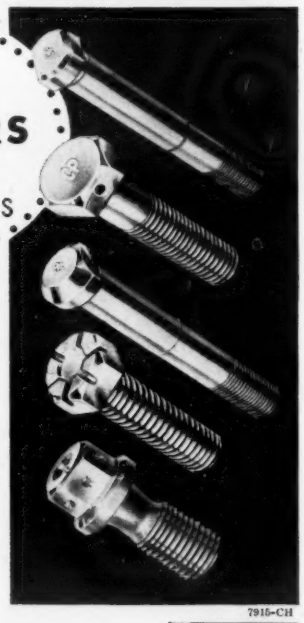
SEND FOR FREE BROCHURE

JOBBERS: Beck EPOXYSTRIP sells on demonstration. Try it and see for yourself.

BECK EQUIPMENT COMPANY
3350 WEST 137th STREET — CLEVELAND 11, OHIO

For more details circle NED-384 K8 on enclosed inquiry slip

precision metal FASTENERS to your specifications



Chandler makes "precision" a reality . . . not just a "catch word". Here's how . . . constant production control assures high quality fasteners with the ultimate in uniformity, accuracy . . . and economy. Chandler's rigid inspection standards mean you get fasteners that provide maximum resistance to stress, vibration and shear. For over 25 years Chandler has supplied the automotive, engine and aircraft industries with . . .

- ★ Self-Locking Place Bolts
- ★ Connecting Rod Bolts
- ★ Automotive Special Bolts
- ★ Special Aircraft Engine Bolts
- ★ "AN" Aircraft Engine Bolts
- ★ "NAS" Aircraft Bolts

If you're looking for fasteners to meet your very special requirements, write us today.

7915-CH

Write today for Bulletin 1264-CH

CHANDLER PRODUCTS CORPORATION
1495 Chardon Road • Cleveland 17, Ohio

For more details circle NED-385 K8 on enclosed inquiry slip

SELF-PROPELLED DIESEL AIR COMPRESSOR

SELF-PROPELLED DIESEL AIR COMPRESSOR

Does all kinds of plant maintenance work
Costs no more than towed portables

The Schramm 125 cfm Heavy Pneumatractor can do all types of maintenance jobs in your plant that call for a tractor or compressor. It's a self-propelled air compression plant *and* a wheel tractor—converting instantly from one to the other, right from the instrument panel. No trucks. No towing. No wasted manpower. One man drives *and* operates the Pneumatractor. And it costs no more than ordinary towed portables.

Write for Catalogs 5740 and PD-57 or see your Schramm Dealer.

Schramm, Inc.
MANUFACTURERS OF AIR COMPRESSORS
700 North Garfield Ave. • West Chester, Pa.

SELF-PROPELLED DIESEL AIR COMPRESSOR

SELF-PROPELLED DIESEL AIR COMPRESSOR

For more details circle NED-386 K8 on enclosed inquiry slip

POCKET RADIO S[illegible]
receivers and [illegible]ansmitter simplify two-way radi[illegible] [illegible]ommunication

Easy radio communica[illegible] is extended to the man [illegible] foot by introduction of [illegible] Handi - Talkie pocket [illegible]ceivers and a pocket tr[illegible]mitter. These transistor [illegible] units are powered by ea[illegible] changed mercury cells wh[illegible] give 120 to 200 hours of [illegible]eration, or rechargea[illegible] nickel - cadmium batte[illegible] which provide 20 hours [illegible] operation per charge.

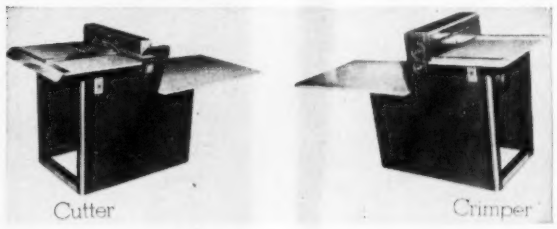
One model receiver is in production. It picks up all radio signals on a system's frequency, making possible immediate contact with key personnel in industrial activities using two-way radio. This 10½ to 12-oz receiver employs printed circuits, is shockproof, and is available for operation on either 25-54 mc or 144-174 mc frequency bands. It delivers 100 mw power to the built-in speaker for clear, crisp voice reception.

Illustrated 46-oz transmitter provides 1¼-w radio frequency output in the 25-54 mc band and 1 w in the 144-174 mc band. Easily carried on one's belt, this transmitter is in the operational field testing stage, as is a second model pocket receiver which has a selective signalling feature. Made by **Motorola, Inc.**, Communications & Industrial Electronics Div., Dept. NED, 4501 W. Augusta Blvd., Chicago 51, Ill.

For more details circle NED-387 K8 on enclosed inquiry slip

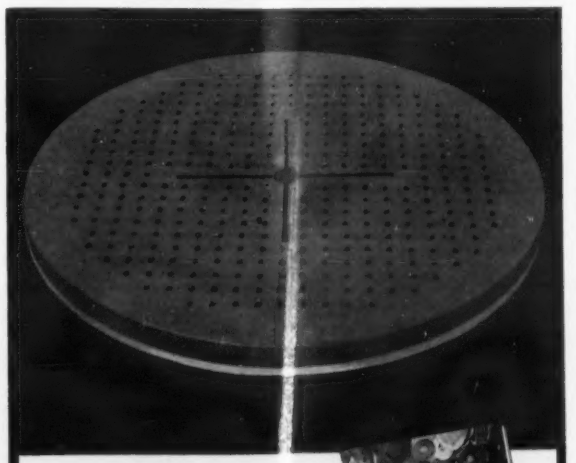
CARTON CUTTERS & CRIMPERS
salvage and crimp corrugated paper

Used by shippers, packers, and others to reduce packaging costs, improve shipping protection, and salvage materials from used corrugated cartons, ComptoPak

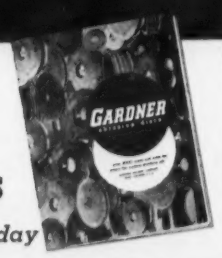


cutter and crimping machines are easy to use. The cutter salvages cardboard and corrugated cartons by cutting the material into strips or sheets up to 24 in. wide. Any size sheet can be obtained, depending upon packing need. The crimper processes the cut corrugated sheets into reusable, strong, pliable corrugated wrapping and packaging material. These crimped sheets are easy to store, handle, and use. Made by **Comptometer Corp.**, ComptoPak Div., 1721 N. Paulina St., Chicago 22, Ill.

For more details circle NED-388 K8 on enclosed inquiry slip



new 20-page selector guide for abrasive discs

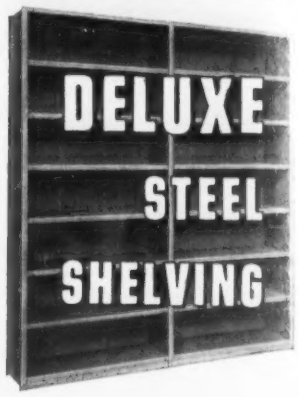


...send for your copy today

GARDNER abrasive discs
MACHINE COMPANY
460 Gardner St.
Beloit, Wisconsin

For more details circle NED-389 K8 on enclosed inquiry slip

fastest TO ERECT
fastest TO RE-ARRANGE
fastest TO PAY FOR ITSELF



fastest because . . . the exclusive Deluxe boltless shelf bracket replaces 90% of time-consuming nuts and bolts, providing quick installation and quick, easy shelf adjustment.

Proof of this was demonstrated at 1958 trade shows where two girls erected a complete section of Deluxe Shelving in less than 5 minutes.

Call your local Deluxe dealer for quick, efficient shelving layout service. Or write for the new Deluxe Shelving Catalog #30.

DELUXE METAL FURNITURE CO. • WARREN 2, PA.
A Division of the Royal Metal Mfg. Co.

DELUXE

For more details circle NED-390 K8 on enclosed inquiry slip

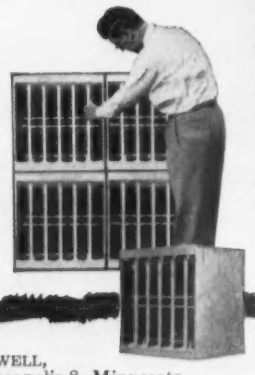
HONEYWELL'S ELECTRONIC AIR CLEANER

ends processing problems caused by air-borne dust, abrasives, soot, smoke and grime

These costly microscopic spoilers never get a chance to ruin the work when Honeywell's Electronic Air Cleaner is on the job. It electronically traps particles so small they are visible only through an electron microscope—outperforms ordinary mechanical air filters six to one! Saves cleaning and painting costs, too. Modular construction; easy to install. Fill out coupon for complete details.

SOON PAYS FOR ITSELF IN...

- film and data processing
- lens grinding
- furniture finishing
- electronic tube manufacturing
- constant temperature and humidity rooms
- switch and relay rooms
- broadcast transmitters
- many other applications



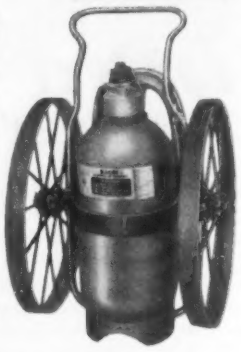
MINNEAPOLIS-HONEYWELL,
Dept. NW-10-72 Minneapolis 8, Minnesota
Please send free copy of Electronic Air Cleaner booklet, "A Close Look At Air-Borne Dirt."
We have the following problems:_____

*Name*_____
*Company*_____
*Address*_____
*City*_____ *Zone*____ *State*____

For more details circle NED-391 K8 on enclosed inquiry slip

NEW!

One-Man Dry Chemical Kills More Fire Faster!



Now—get more fire-smothering dry chemical on a blaze faster – with this new Kidde 200-pound mobile unit! Its universal nozzle discharges a dense 40-foot stream, gives more efficient extinguishing action, greater heat protection for the operator. And check these many Kidde features:

50 Extra Pounds of Dry Chemical • Low Total Weight • No Valves to Unscrew • Three-Step Operation • 3-Ton Seal is Leak-and-Tamper-Proof • Low Center of Gravity • Compact Design • Weather-Protected Mechanism • Shielded Gauge • U.L.-Approved

Kidde

Walter Kidde & Company, Inc.
1024 Main St., Belleville 9, N.J.

Walter Kidde & Company of Canada Ltd., Montreal — Toronto — Vancouver

▲ For more details circle NED-392 K8 on enclosed inquiry slip ▲

Easy to operate. Extremely durable. Simple to maintain.

For your files: Complete specifications and price list for all models. SEND INQUIRY CARD TODAY.

"CADILLAC"
LOW-COST
WINCH HOIST

Every Hoist PRE-TESTED for MAXIMUM PERFORMANCE MAXIMUM SAFETY

Check these features:

- Precision-built of certified materials.
- High-strength, corrosion-resistant TENZ-ALOY castings. Tensile strength 32,000.
- Light weight and compact.
- Stainless steel springs and shafts.
- Manganese bronze cam reduces pawl wear.
- "Safety-valve" handle breaks at severe overload.
- Drop-forged, heat-treated hooks. Safety hooks available.
- Equipped with galvanized, pre-formed aircraft wire rope.
- Tested to full 50% overload.
- Full year guarantee against defective workmanship and materials.

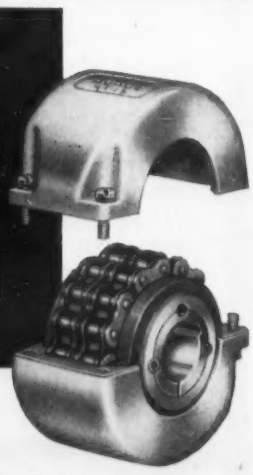
Model 202WX 1½-ton capacity equipped with 20' of 3/16" galvanized wire rope. Lifting ratio approx. 30 to 1. Weight 10 lbs. Min. distance between hooks 25". 20' single, 10' double line. Models from ½ to 2 tons cap. Prices: $29.50 and up.

ALUMINUM PRODUCTS, INC.
P.O. BOX 1462-N FORT LAUDERDALE, FLORIDA

▲ For more details circle NED-393 K8 on enclosed inquiry slip ▲

NOW!

TAPER-LOCK CHAIN COUPLINGS



Off the shelf... No reboring

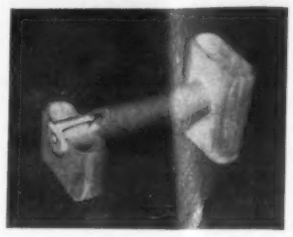
New Dodge Chain Couplings (with new line of aluminum covers, too!) provide strong, positive, compact coupling of shafts, with accomodation for usual slight misalignment. Like Dodge Flexible and Rigid Couplings, the new Chain Couplings employ the famous Taper-Lock Bushings, available in desired sizes from distributors' stocks — no reboring required. For detailed information write now for Bulletin A644.

Dodge Manufacturing Corporation, 2100 Union St., Mishawaka, Indiana

DODGE
of Mishawaka, Ind.

▲ For more details circle NED-394 K8 on enclosed inquiry slip ▲

GLASS FIBER LADDER
lightweight and nonconductive



Both rungs and siderails of this ladder are made of glass fiber reinforced plastic. Rungs are locked into the rails to eliminate twisting or turning and will withstand a static weight of 800 lb at any point. They are electrically nonconducting. Single and extension types with nonslip rungs are noncorrosive, will not burn, and withstand temperatures up to 200° F. Standard color is steel gray, but contrasting colors for siderails and rungs can be furnished as a safety feature. Made by **American Allsafe Co.**, Dept. N, 1245 Niagara St., Buffalo 13, N. Y.

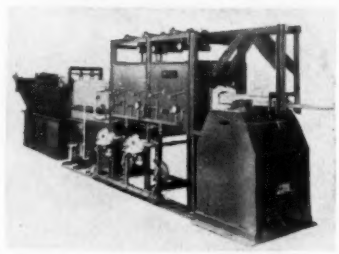
▲ For more details circle NED-395 K8 on enclosed inquiry slip ▲

FLOATING ANCHOR NUTS
miniature sizes save space

Especially suitable for miniaturized electronic, missile, or avionic equipment, these four miniature two - lug floating anchor nuts meet a wide range of fastening requirements. These lightweight units meet requirements of MIL-N-25027 (ASG) specifications for tensile, vibration, twist-out, and push-up. A broad range of sizes, rivet hole spacings, elevated temperature qualifications, and finishes is available. Made by **Elastic Stop Nut Corp. of America**, 2331 Vauxhall Rd., Union, N. J.

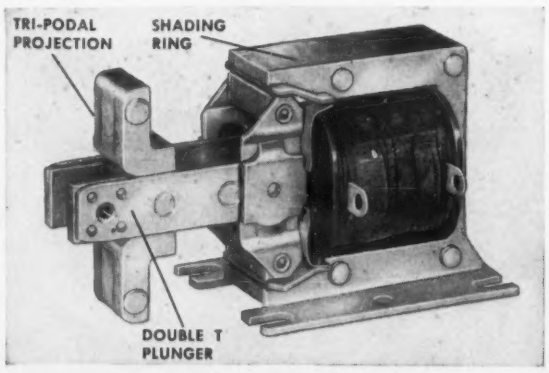
▲ For more details circle NED-396 K8 on enclosed inquiry slip ▲

SHAKER HEARTH FURNACE
anneals stainless steel at 1900° F



Bright annealing and hardening of small stainless steel parts at temperatures up to 1900° F can be done in this No. 264 shaker hearth furnace which has a capacity of 100 lb of parts per hour. Work conveying muffle of the reciprocating furnace imparts a forward motion to the parts. The alloy muffle incorporates purging, heating, and water-jacketing cooling section, and seals into an automatic conveyorized oil tank. Muffle maintains dew points as low as −90° F. Parts travel individually through purging, heating, and cooling cycles and can be observed through openings in muffle's charge and discharge ends. Made by **American Gas Furnace Co.**, 534 Lafayette St., Elizabeth, N. J.

▲ For more details circle NED-397 K8 on enclosed inquiry slip ▲



Soreng's NEW double T design solenoid packs more pull for more applications

Soreng's exclusive double T (TT) plunger construction makes the big difference. This unique design results in level, more powerful pull throughout the useful plunger stroke. And Soreng solenoids are more efficient — thanks to stable tripodal seating and tightly locked shading rings. These features are custom-built into each of Soreng's four basic solenoid types satisfying virtually any application need at production run prices.

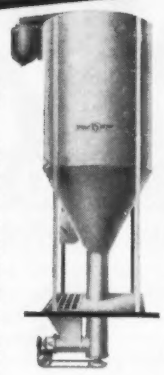
Write for new Solenoid Bulletin. It contains drawings, power curves, applications and other technical data on Soreng solenoids.

CONTROLS COMPANY OF AMERICA
Manufacturers of SORENG Controls
9577 SORENG AVE., SCHILLER PARK, ILL.

▲ For more details circle NED-398 K8 on enclosed inquiry slip ▲

CUT MIXING COSTS!

SPROUT-WALDRON
VERTICAL MIXERS



These mixers handle an amazingly wide variety of materials with less horsepower, less floor space, less maintenance, less first cost than any other type of mixers. Sizes up to 1500 cu. ft. can operate on as little as 30 h.p. They're completely self-cleaning. Ideal for use as agitated storage reservoirs.

Write for Bulletin 192

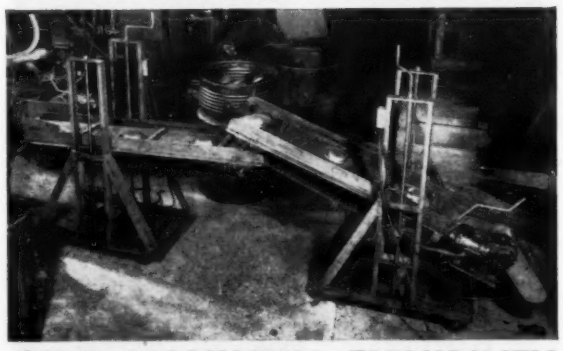
Sprout-Waldron also offers a complete line of horizontal mixers. Write for details.

IN/503A

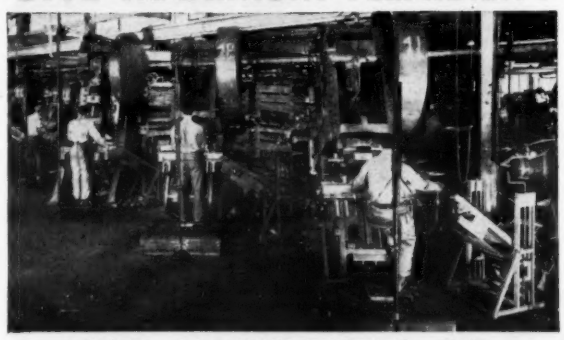
SPROUT-WALDRON
Manufacturing Engineers Since 1866
MUNCY, PENNSYLVANIA
EQUIPMENT FOR SIZE REDUCTION—MIXING & BLENDING — BULK MATERIALS HANDLING — PELLETING & CUBING — PRODUCT CLASSIFICATION

▲ For more details circle NED-399 K8 on enclosed inquiry slip ▲

LITTLE HUSTLER CONVEYORS

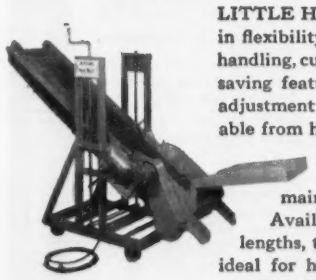


GIVE MAXIMUM FLEXIBILITY



FOR MANY TYPES OF

MATERIALS HANDLING JOBS



LITTLE HUSTLER conveyors' built-in flexibility eliminates costly manual handling, cuts production costs. Money-saving features include up and down adjustment . . . conveyor pitch adjustable from horizontal to 45° angles . . . rolls easily from job to job . . . requires minimum maintenance.

Available in various widths and lengths, the LITTLE HUSTLER is ideal for handling a wide variety of small and medium size parts. Write for Bulletin MF-2-413.

MAY-FRAN ENGINEERING, INC.
1711 Clarkstone Road, Cleveland 12, Ohio

▲ For more details circle NED-400 K8 on enclosed inquiry slip ▲

BREATHER-FILTER

Protects housings, crankcases, storage tanks.

The Air-Maze breather-filter keeps dust out of engine and compressor crankcases, gear-cases, hydraulic equipment, liquid storage tanks and machinery. Types and sizes available in both oil-wetted and oil bath models to protect every vented housing.

In the oil-wetted type, dust is impinged on a series of oil-wetted wire baffles. In the oil bath type, used where the dust concentration is unusually high, the filter media is enclosed in a bowl. Outside air must first pass through the oil, then the filter media, before entering crankcase or housing. Also functions as a backfire flame arrester.

Available in sizes from 1/8" to 3 1/2". Permanent, all-metal, easily cleanable. Write for booklet BC-453. Made by AIR-MAZE CORPORATION, Cleveland 28, Ohio.

▲ For more details circle **NED-401 K8** on enclosed inquiry slip ▲

PENNSYLVANIA SCALES

FAST... ACCURATE COUNTING when your PROFIT IS IN THE BALANCE

Pennsylvania Counting Scales protect your profits in two ways . . . by speeding production counting and weighing . . . and by precision accuracy that eliminates profit-stealing waste and over-weights.

- Counting Scales
- Over/Under Scales
- Fan Dial Scales
- Food Scales
- Grain & Dockage Scales
- Industrial Scales
- Laboratory Scales
- Special Purpose Scales

FREE BOOKLET

Don't let hand counting or incorrect counting scales waste your money. Write for copy of "Counting Scale Cost Saving Report" . . . explains procedures and gives valuable tips.

Golden Anniversary 1908 1958 PENNSYLVANIA SCALE COMPANY BAREVILLE, PA.

PENNSYLVANIA SCALES
Pennsylvania Scale Company • Bareville, Pa.

▲ For more details circle **NED-402 K8** on enclosed inquiry slip ▲

NEW J&J VERTILOK

SIDE BRAKE

for Medium Duty Plate Casters

To provide greater locking strength, the J & J "Vertilok" side brake features a vertical cam action and a specially formed brake shoe which contacts the maximum tire tread area. A slight press of the toe and the wheel is securely locked . . . or completely released. Provision is made for adjustment of the braking action to compensate for wheel or tire wear. Simplicity of design and rugged construction assure long, trouble-free life.

Sold Through Quality Dealers

Jarvis AND Jarvis, Inc. PALMER, MASSACHUSETTS

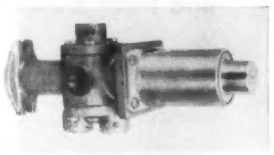
Sales Representatives in Leading Cities Throughout the Country

IN CANADA: Jarvis & Jarvis of Canada, 1744 William St., Montreal, Que.

Suitable for all 4" to 6" rubber wheels, with hard or soft tread; steel disc replaceable tread wheels, 4", 5" and 6" diameter; also medium casters with standard 4" x 4" top plate.

▲ For more details circle **NED-403 K8** on enclosed inquiry slip ▲

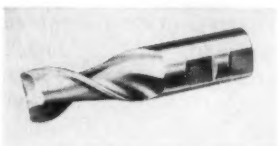
SOLENOID VALVES for pressure up to 3000 psi



Solenoid Shear-Seal valves, for operation on 12, 24, or 125 v dc, are rated for oil and water pressures from 0 to 250, 1500, and 3000 psi. On air circuits, ratings are 0 to 250, 1000, and 1500 psi. Valves are offered in three-way, four-way, shutoff, and diverter flow patterns, with standard or explosionproof solenoid housings. Shear-Seal design embodies a self-aligning sealing ring in direct contact with mating slide. Metal-to-metal sealing surfaces continue to lap themselves with each operation, maintaining leakproof performance indefinitely. Made by **Barksdale Valves**, Dept. NED, 5125 Alcoa Ave., Los Angeles 58, Calif.

▲ For more details circle **NED-404 K8** on enclosed inquiry slip ▲

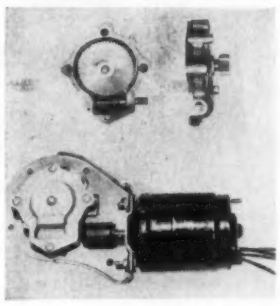
END MILLS for aluminum, in 1/4 to 2-in. sizes



Generous chip clearance for milling aluminum and its alloys is featured by 39 high speed steel end mills recently added to company's line of cutters. A 40-degree helix and 20-degree rake achieve maximum efficiency on shearing cuts. A ground overall finish and ground eccentric relief of cutting edges add to performance. Standard, long and extra long mills are offered in 1/4 to 2-in. diameters. Made by **Brown & Sharpe Mfg. Co.**, Cutting Tool Div., Dept. 43, Providence 1, R. I.

▲ For more details circle **NED-405 K8** on enclosed inquiry slip ▲

WORM GEAR TRANSMISSION for 1/9, 1/6, or 1/5-hp motors



This worm gear power transmitter which reduces motor revolutions and increases torque can be used with motors rated up to 1/9 hp at 2000 rpm, 1/6 hp at 3000 rpm, or 1/5 hp at 4000 rpm. It can be used for any operation in which electrical power must be converted to rotary or straight-line mechanical actuation, such as in boat power steering mechanisms, or reciprocal movement of tools and fixtures. Units are offered in 52:1 and 27.5:1 ratios with either a six or eight-tooth pinion. Output is at right angles to motor shaft input. Inline mounting plates are available. Unit locks against reversing torques on output shaft. Made by **Hupp Corp.**, Huppower Div., 7452 Melville Ave., Detroit 17, Mich.

▲ For more details circle **NED-406 K8** on enclosed inquiry slip ▲

MARTIN-DECKER SENSATER

HOOK SCALE

A VERSATILE HOOK SCALE FOR EVERY INDUSTRY!

- EASY TO READ
- EASY TO HANDLE
- MORE CONVENIENT
- SAFER

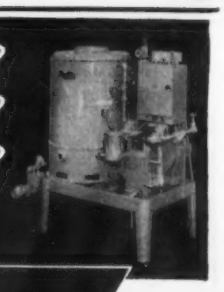
CERTIFIED ACCURACY

WRITE FOR DESCRIPTIVE LITERATURE Dept. S-24

MARTIN-DECKER CORP.
HOME OF THE WEIGHT INDICATOR — LONG BEACH, CALIFORNIA

▲ For more details circle **NED-407 K8** on enclosed inquiry slip ▲

NEED MORE steam? NEED MORE space? NEED MORE production?



Clayton STEAM GENERATOR

UP TO 4 TIMES H.P. IN SAME SPACE

★ INSTALL ANYWHERE...
★ ELIMINATE NEED FOR BIG BOILER ROOM OR LONG MAINS!

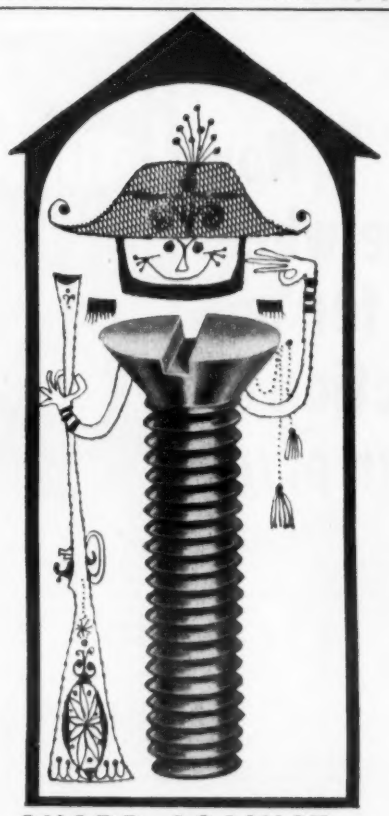
If you need more steam . . . more production space . . . PLUS fuel savings up to 53% – then you owe it to yourself to investigate the Clayton Steam Generator! Compact (up to 4 times H.P. per square foot of floor space) . . . lightweight, install on any floor, on roof, in basement – yes, even in closets and "waste" space!

Exclusive! ONLY CLAYTON GIVES THIS *5-Year Published Warranty*. Of every 100 Clayton generators produced (in the last 26 years), 97 are still serving users profitably and efficiently. Compare Clayton's 5-year published warranty on material and labor.

SEND FOR COMPLETE INFORMATION

Clayton MANUFACTURING COMPANY
Box 550 El Monte, California • Cincinnati, Ohio

▲ For more details circle **NED-408 K8** on enclosed inquiry slip ▲



GUARD AGAINST CORROSION WITH ALCOA ALUMINUM FASTENERS

Whatever you make, make it better of aluminum and fasten it with Alcoa® Aluminum Fasteners. Guard against both galvanic and atmospheric corrosion and get lasting sales appeal with bright, carefree aluminum fasteners. For your requirements, call your nearest Alcoa sales office. Complete stocks of all standard types and sizes of Alcoa Aluminum Fasteners are on hand at your local Alcoa distributor. Look in the Yellow Pages of your telephone directory.

ALCOA ALUMINUM FASTENERS

ALCOA THEATRE Exciting Adventure Alternate Monday Evenings.

Your Guide to the Best in Aluminum Value

FREE . . FACTS, SAMPLES . . FREE . . FACTS

Aluminum Company of America
2245-K Alcoa Bldg., Pittsburgh 19, Pa.

Gentlemen: Please send complete specification data and samples of Alcoa Aluminum Fasteners.

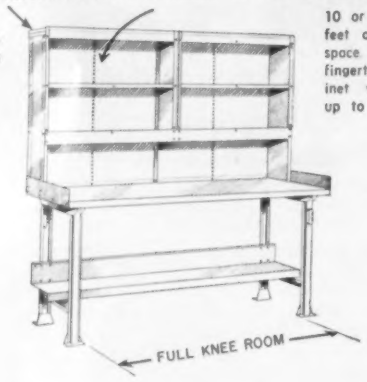
Name _____
Title _____
Company _____
Address _____

▲ For more details circle **NED-409 K8** on enclosed inquiry slip ▲

THE ANSWER:

BAY "HANDICABINET"® BENCHES

—The Greatest Modern Advance in workbench design



Throw away your stone age workbench! Now available for immediate shipment are these which make all others obsolete. Keep your working area uncluttered, yet with all necessary tools and equipment at your fingertips. Write today for our catalog and the name of your local Bay Distributor.

BAY PRODUCTS INC.

1821 W. Cambria St., Philadelphia 32, Pa.

For more details circle NED-410 K8 on enclosed inquiry slip

HARDNESS TESTER
has 10 x 14-in. throat opening and light indication of hardness

The workpiece position must be proper before this semiautomatic Brinell hardness tester can operate. A limit switch located in the table fixture must be depressed by the part before the knee-actuated cycle switch is energized. This test position is predetermined by fixture design and setup. Cycle time is 2 sec.

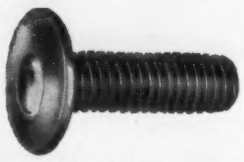
Colored lights indicate the relative hardness of the part: Yellow indicates too hard; red, too soft; and green, acceptable. Machine can distinguish a difference in impression diameter of 0.1 mm. Limits for the Brinell range are set by standard pieces of known hardness. Operation after actuation of limit and cycle switches is automatic. Throat depth is 10 in. and maximum vertical opening is 14 in. Loads from 500 to 3000 kg can be applied. Made by **Steel City Testing Machines, Inc.**, Dept. L, 8817 Lyndon Ave., Detroit 38, Mich.

For more details circle NED-413 K8 on enclosed inquiry slip

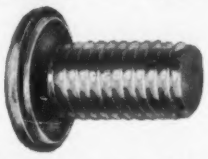
OHIO WELD SCREWS

THE PRIMARY FASTENERS IN FASTENER ASSEMBLIES

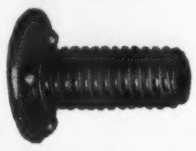
GW SCREWS — Used where design requires a smooth unmarred surface and a fastener permanently fixed in place.



HH SCREWS — Used where a single, button-type projection is required when welding to curved surfaces, to heavy sheet 3/32" or thicker, or to ends of rods.



RW SCREWS—Used where a hermetic seal is required to prevent leakage of air, gas, water, oil or dust, or when welding to perforated metal or wires.



HW SCREWS—Used where a self-locating through bolt is required to be fixed securely in place so that it will not turn and a flush surface is required for attaching mating parts.

Thread Size 6-32 to 3/8-16

OVER 50 YEARS OF BETTER FASTENING

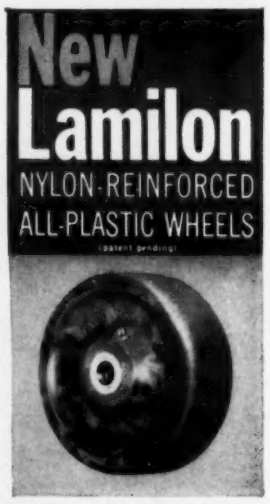
Samples and information available upon request.

THE OHIO NUT & BOLT CO.

14 First Avenue • Berea, Ohio

For more details circle NED-416 K8 on enclosed inquiry slip

Now one wheel for any section of your plant



Now you standardize on one wheel for all your materials handling equipment. Fairbanks "Lamilon" Wheels protect your floors, for they stay smooth and concentric, don't mar or mark. Not affected by oils and greases, "Lamilon" Wheels have very high resistance to most chemicals, and have a water absorption factor almost as low as high quality rubber. With their alloy steel roller bearings, hardened steel outer race and provision for pressure lubrication, "Lamilon" Wheels roll easier, last longer and give more dependable service than any other plastic wheel.

Available in sizes 3 through 12 inches. Can be furnished with threadtight thread guards.

THE FAIRBANKS COMPANY

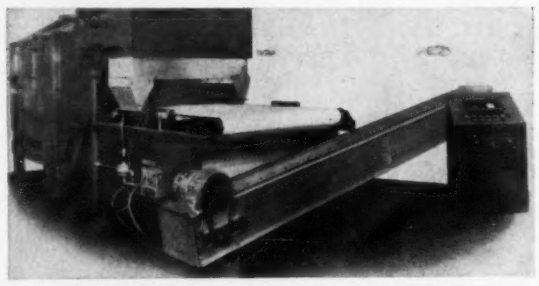
Valves • Dart Unions • Casters • Trucks • Wheels

Executive Office—393 Lafayette St., N. Y. 3, N. Y. • **Branches**—520 Atlantic Ave., Boston 10, Mass. • 393 Lafayette St., N. Y. 3, N. Y. • 15 Stanwix St., Pittsburgh 22, Pa. • 202 Division St., Rome, Ga. • **Factories**—Rome, Georgia and Binghamton, N. Y.

For more details circle NED-411 K8 on enclosed inquiry slip

CONTROLLING WEIGH BELT
automatically controls flow of light, low density products

Rate of feed of leafy, fibrous, shredded, flaked, chipped, extruded, pelletized, or any low density, relatively light product can be controlled accurately within ±1



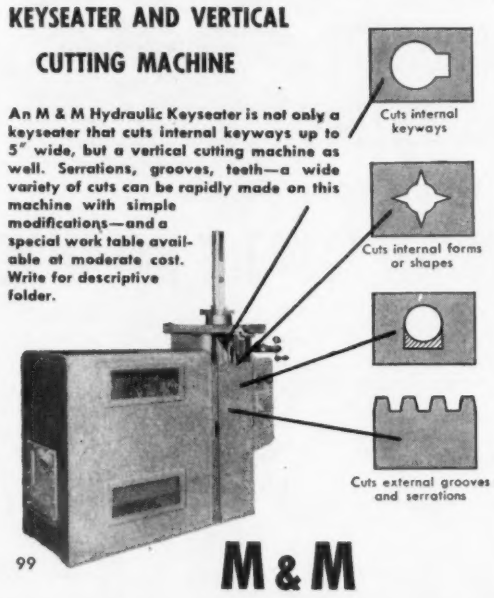
per cent of maximum scale reading by the Proctor controlling weigh belt. It is used in conjunction with a Proctor feeder and incorporates a constant speed, chemically inert, lightweight conveyor.

Amount of material passing over this conveyor is continuously and automatically weighed. Any variance in weight is transmitted to the feeder control, and the feeder speed is corrected to maintain the preset rate of feed. The controlling weigh belt may be used without an auxiliary feeding device and the rate of delivery indicated by a digit integrator or chart type recorder. Made by **Proctor & Schwartz, Inc.**, 702 Tabor Rd., Philadelphia 20, Pa.

For more details circle NED-414 K8 on enclosed inquiry slip

TRIPLE THE USEFULNESS OF YOUR M&M KEYSEATER AND VERTICAL CUTTING MACHINE

An M & M Hydraulic Keyseater is not only a keyseater that cuts internal keyways up to 5" wide, but a vertical cutting machine as well. Serrations, grooves, teeth—a wide variety of cuts can be rapidly made on this machine with simple modifications—and a special work table available at moderate cost. Write for descriptive folder.



99

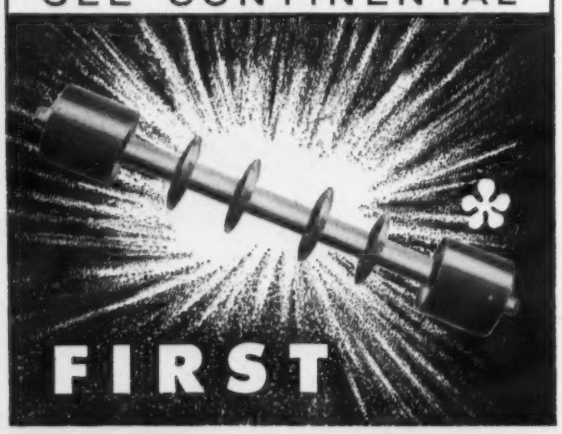
M & M

KEYSEATERS AND VERTICAL CUTTING MACHINES

MITTS & MERRILL • 1000 So. Water St. • SAGINAW, MICH.

For more details circle NED-417 K8 on enclosed inquiry slip

SEE CONTINENTAL



FOR *Return Idlers*

Rubber Disc Return Idlers are ideal for belt conveyors handling damp, sticky, abrasive, or clinging materials.

Wide End Roll Rubber Disc Return Idlers support heavy belts, and assist belt training.

See Continental FIRST for ALL your conveying needs!

CGC

INDUSTRIAL DIVISION

Continental Gin Company

BIRMINGHAM, ALABAMA

ATLANTA • DALLAS • KNOXVILLE • MEMPHIS • MOBILE • NEW YORK 17

For more details circle NED-412 K8 on enclosed inquiry slip

RMC Dial Thermometers will serve you best!

HERE'S WHY:

1. Only RMC does a genuine hermetic sealing job to prevent bimetal freeze-up and dial fogging.
2. Only RMC offers an external dial-reset device to permit on-the-job recalibration when necessary.
3. The bi-metallic helix is silicone dampened to withstand shock and vibration; with special dampening bearings.
4. #304 Stainless Steel and heliarc welding provide superior resistance to corrosion.
5. RMC can give you the right thermometer for the job. Many different types are available, with dial sizes ranging from 1" to 5" Scale ranges from −150°F to +1000°F.

RMC

REPRESENTATIVES IN ALL PRINCIPAL CITIES

ROCHESTER MANUFACTURING CO.

114 ROCKWOOD STREET — ROCHESTER 10, N.Y.

For more details circle NED-415 K8 on enclosed inquiry slip

Formed Wire Products

ALL SIZES, SHAPES AND WEIGHTS

FLAT OR ROUND WIRE TO 1/2" DIAMETER

Made to your specifications in production quantities. Resistance welded at all points of contact. Available in zinc plate with zinc chromate and lacquer or dipped polyvinyl to your color specifications.

Fast, efficient delivery geared with your production schedules.

Write today for more information.

Peerless FORMED WIRE PRODUCTS

PEERLESS WIRE GOODS COMPANY, INC.

2706 FERRY STREET • LAFAYETTE, INDIANA

For more details circle NED-418 K8 on enclosed inquiry slip

For Faster, Better Soldering

Use Rubyfluid

RUBYFLUID'S better soldering flux—liquid or paste—assures you of strong, neat unions, quickly and easily. RUBYFLUID'S fast acting formula wets out freely . . . is free from objectionable and harmful fumes . . . is economical to use.

For stainless steel soldering, use RUBY'S Special Stainless Steel flux . . . designed specifically for this application . . . requires no extra heat, no extra equipment, will not corrode or discolor metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

▲ For more details circle NED-419 K8 on enclosed inquiry slip ▲

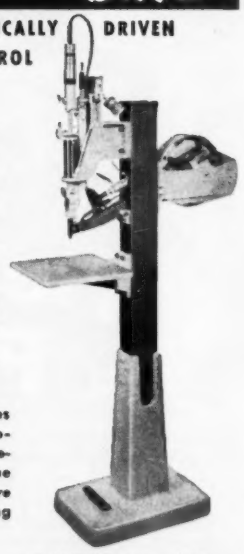
NEW DIXON AUTO-TORQUE *Driver*

SCREWS AND NUTS AUTOMATICALLY DRIVEN WITH PRECISE TORQUE CONTROL

Gives you . . .

1. Complete control of screws from parts feeder to chuck, until threads are started. No dependence on gravity to load chuck.
2. Exclusive built-in sensing, assures that screw is driven. Automatically retracts driver only after attaining proper torque.
3. Complete automatic cycle, requires only a touch of the pedal.
4. Torque accuracy within 5%, comparable to most precise hand-torquing methods.
5. Clutch free-wheels after driving. Operator cannot vary the torque.
6. Two ranges of torque available 0 to 84 inch-pounds and 48 to 120.
7. Work height adjustment with 14" range, can be made without in any way disturbing the machine adjustments.

The new DIXON *Auto-Torque Driver* includes all the features of the DIXON Auto-Positioner, and has an efficient space-saving air motor with an adjustable-torque clutch. These features provide for *positive* handling, giving new efficiency in driving screws and nuts.



Full information available in bulletin No. SD-82.

Model SD-100, above, tooled for any standard screw up to 5/16" thread size. Special tooled units with multiple feeders available. Model SD-101, without floor column, provides a complete automatic station. Maximum width 6 inches.

DIXON AUTOMATIC TOOL, INC.
2302 - 23rd AVENUE
ROCKFORD, ILLINOIS

DIXON

EQUIPMENT FOR AUTOMATIC PARTS HANDLING AND ASSEMBLY

▲ For more details circle NED-420 K8 on enclosed inquiry slip ▲

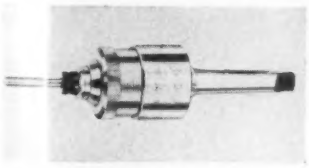
Whether you mark materials, parts, products or packages, there's a Markem machine ready to bring low cost, high production identification or decorative marking to your plant. From plastics to fabrics . . . transistors to camera parts . . . multi-color decorative marking to high production offset marking — there's a *Markem Method* to meet your marking needs. One source, with 47 years of experience in all industries, can supply the machines, type, inks, accessories and service you need. For complete information, write Markem Machine Company, Keene 3, New Hampshire.

MARKEM

EVERYTHING INDUSTRY NEEDS . . . FOR PROFITABLE MARKING . . . SINCE 1911

▲ For more details circle NED-421 K8 on enclosed inquiry slip ▲

TAPPING ATTACHMENT has free-floating precision spindle



Untrained operators can produce near-perfect threads consistently with this Swedish S.P.V. Tapmaster tapping attachment. Free-floating spindle results in weightless axial movement. Service and spare parts are available throughout the U. S. Distributed by **Homestrand, Inc.**, 11 Addison St., Larchmont, N. Y.

▲ For more details circle NED-422 K8 on enclosed inquiry slip ▲

ELAPSED TIME INDICATOR records hours and tenths of hours

Low - cost Series ED - 71 elapsed time indicator is equipped with a direct-reading, five-digit counter that records hours and tenths up to 9999.9, then repeats. Unit weighs only 5 oz and measures 1½ in. diameter by 2 31/64 in. long. It can be applied to machine tools, instruments, communications equipment, and heavy industrial machines where accurate record of operating time is desired. It withstands severe vibration and will operate in a −55 to 71° C range. Unit is equipped with a synchronous timing motor and is supplied for 120 or 240 v ac. Made by **General Time Corp.**, Haydon Div., 245 E. Elm St., Torrington, Conn.

▲ For more details circle NED-423 K8 on enclosed inquiry slip ▲

GAS-OXYGEN BURNER works 3 to 100-mm hard glass tubing

Designed for general purpose use in laboratories and glass shops, this gas-oxygen bench burner will work any size hard glass tubing from 3 to 100 mm at city gas pressure of ¼ psi. Burner has only two fuel inlets to minimize hose tangling. Knob-actuated self-locking gear and friction swivel afford fast, accurate adjustment. Burner can also be used for soldering and brazing, to heat treat metal parts, and for annealing. It operates on natural and manufactured gas, propane, and on hydrogen with oxygen. It is really two burners in one, with two sets of needle valves for separate adjustment of each burner. Made by **Bethlehem Apparatus Co.**, Dept. NED, Front & Depot Streets, Hellertown, Pa.

▲ For more details circle NED-424 K8 on enclosed inquiry slip ▲

FRESH IDEAS

. . . for product improvement

Here's an easy way to make a dramatic change in the personality of your product: make the grille, screen, guard, etc., of Penmetal Multimesh.

These distinctive new expanded metal patterns* provide a handsome, fresh appearance—used wherever perforated metal, woven wire, decorative louvers or small-mesh expanded metal have been applicable in the past.

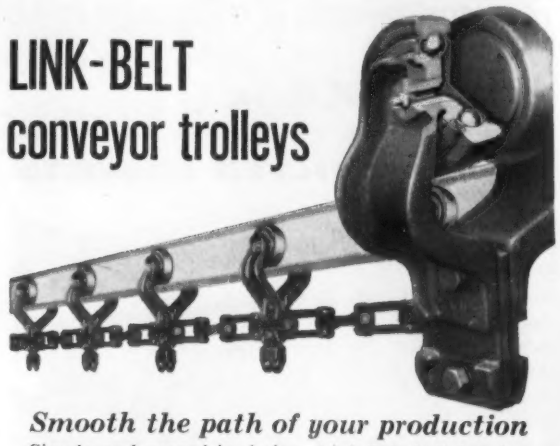
Free folder 516-EM tells all about Multimesh. Write today.

PENN METAL COMPANY, INC.
General Sales Office: 40 Central Street, Boston 9, Mass.
Plant: Parkersburg, W. Va.

*Design patents pending on all patterns. PM-180

▲ For more details circle NED-425 K8 on enclosed inquiry slip ▲

LINK-BELT conveyor trolleys



Smooth the path of your production

Simple and rugged in design, Link-Belt ball bearing trolleys are engineered to assure rolling contact with the track in all positions. They conform dimensionally and are interchangeable with other trolleys.

Available in 2- or 4-wheel types, for 3-, 4- or 6-in. I-beams, in riveted or bolted types. For complete information, address:

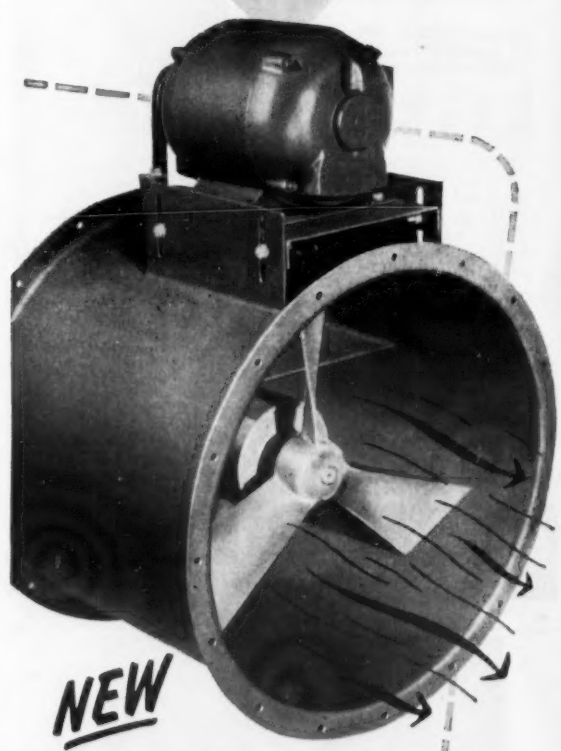
LINK-BELT

BALL BEARING CONVEYOR TROLLEYS

LINK-BELT COMPANY: Executive Offices, Prudential Plaza, Chicago 1. To Serve Industry There Are Link-Belt Plants, Sales Offices, Stock Carrying Factory Branch Stores and Distributors in All Principal Cities. Export Office: New York 7; Canada, Scarboro (Toronto 13); Australia, Marrickville, N.S.W.; South Africa, Springs. Representatives Throughout the World. 14,785

▲ For more details circle NED-426 K8 on enclosed inquiry slip ▲

expel FUMES, HEAT AND DUST at LOW COST



NEW

PROPELLAIR®

belt driven Tubeaxial Fans

Type "BT" Propellair Fans can be purchased and operated at low cost to handle difficult atmospheres such as highly corrosive, explosive, inflammable, grease or dust-laden air. Straight-line design permits easy, inexpensive installation. Platforms and duct elbows are eliminated. The externally mounted Robbins & Myers motor, sealed cast iron housed bearing assembly, air-tight drum and belt-tube provide complete protection. Standard models can handle temperatures up to 450° F. Propellair "BT" tubeaxial fans are available in sizes 16" to 60" for from 2000 to 85000 CFM air delivery.

WRITE FOR BULLETIN NO. 620-N

R&M **PROPELLAIR®**

DIV. OF ROBBINS AND MYERS, INC.
SPRINGFIELD, OHIO

Certified Ratings PMA

MOVING AIR IS OUR BUSINESS

▲ For more details circle NED-427 K8 on enclosed inquiry slip ▲

AN EXCLUSIVE ADVANTAGE OF THE DOLLINGER DESIGN

Easy to Clean

FILTER INSERTS

One of the advantages of the Dollinger Design is the easily cleaned, easily replaceable Filter Insert shown here. A wide variety of filter materials are available in insert form for all types and sizes of filters, permitting quick changes at minimum cost. Write, giving Model No. of filters for which you desire inserts. Dollinger Corporation, 49 Centre Park, Rochester 3, N. Y.

Radial Fin Type Insert

DOLLINGER PROTECTOMATION STAYNEW FILTERS

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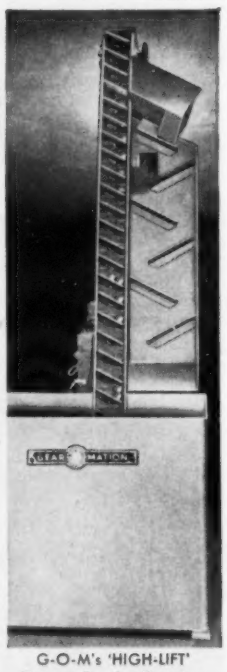
Your Best Bet to Improve Profits . . .

...AUTOMATIC PARTS HANDLING

Gear-O-Mation offers a full line of versatile equipment to give you top control of all kinds of parts into, through or from any process stage. These profit-improving (more than cost-cutting) units are pre-engineered for easy adaptation to your production. For demand control, selective feeding, mobile storage or positive movement of parts, automation by Gear-O-Mation is more than likely the eventual answer. Why not try G-O-M first?

Send for descriptive literature on any of the following equipment:

Washers	Storage Units
Elevators	Skew Loaders
Conveyors	Basket Loaders
Loaders	Distribution Systems
Unloaders	Assembly Devices
Orientors	Size Classifiers
Hoppers	Demand Feeders



G-O-M's 'HIGH-LIFT' Hopper-Feeder-Elevator

Automation by...GEAR-O-MATION
DIVISION OF MICHIGAN TOOL COMPANY
7171 E. McNICHOLS RD. • DETROIT 12, MICH.

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IN FASTENERS SOUTHERN IS

plated

For plated screws that assure maximum corrosion resistance and beauty, you can rely on Southern's plated finishes: nickel, zinc, cadmium, brass, copper, statuary bronze, blued or black oxidized screws. All of these are finished in our own plant to rigid specifications. Southern's chromium plated brass wood screws, machine screws and nuts, and hot galvanized steel wood screws are stocked in all popular sizes. Southern's cadmium and zinc plated fasteners are treated for extra brightness and corrosion resistance with IRIDITE® chromate conversion coating. This also makes the screws suitable for painting, if desired, without additional treatment. Try Southern's quality plated screws. There are no better available — anywhere. Send your order or inquiry to Southern Screw Company, P. O. Box 1360, Statesville, N. C.

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Southern SCREW COMPANY

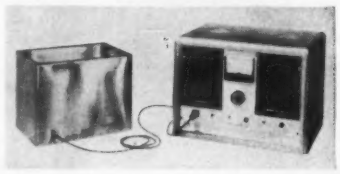
▲ For more details circle NED-430 K8 on enclosed inquiry slip ▲

STUD PIN DRIVER
installs pins in masonry or steel

Easily carried in a pocket, the Fastway Jr. Ham-R-Tool will drive pins into concrete, concrete block, mortar, brick, or steel. Stud pins are inserted in the guide assembly and driven with a machinist's hammer. Full force of the blow is transmitted to the entire stud pin head. Eleven sizes of heat treated, plated, sharp pins are available, both plain and threaded. Applications include fastening floor plates, furring strips, and sheet metal straps. Made by **Fastway Fasteners Inc.**, 1690 E. 28th St., Lorain, Ohio.

▲ For more details circle NED-431 K8 on enclosed inquiry slip ▲

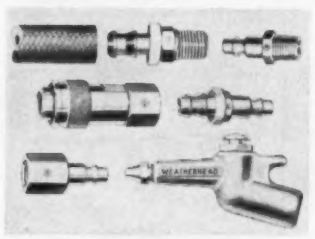
ULTRASONIC CLEANER
110-v unit delivers 1 kw power



Pulsing generator in 5-gal Model DR-250-AH ultrasonic cleaner delivers an output of 1 kw peak power. Maximum cavitation is possible with this intense power which is distributed in a uniform ultrasonic field within the liquid medium. Ultrarapid, thorough cleaning, descaling, degreasing, or decontamination of soiled parts and intricate assemblies is achieved. The 5-gal stainless tank has working dimensions of 14 x 10 x 9½ in. Unit plugs into 115-v ac outlet and will operate continuously. Made by **Acoustica Associates, Inc.**, Dept. NED, 26 Windsor Ave., Mineola, N. Y.

▲ For more details circle NED-432 K8 on enclosed inquiry slip ▲

AIR SERVICE PACKAGE
in sizes from ¼ through ¾ in.

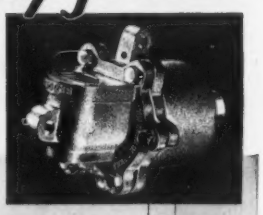


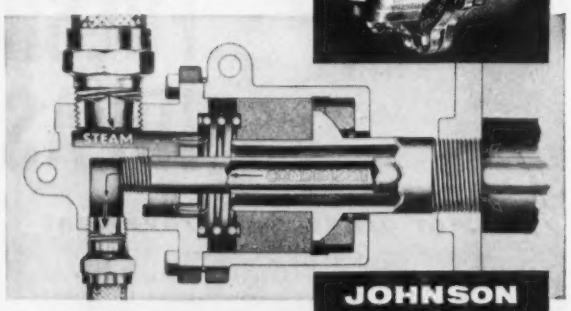
All components required to put together an efficient air service assembly for plant air-line needs are provided in the air service package. Zinc alloy blow gun is pushbutton actuated to meter air. Standard, angle, all-purpose long bendable, and duck-bill nozzle attachments are available. Line of quick-disconnect ends includes check units and adapters with nipple attachments. Push-on Barb-Tite hose ends in ¼ through ¾-in. sizes include male pipe, SAE rigid male, SAE swivel, JIC swivel, rigid inverted female, inverted male swivel, rigid tube, and hose mender styles. Either fiber or rubber-covered hose is applicable. Pressure recommendations are to 250 psi. Offered by **Weatherhead Co.**, Ft. Wayne Div., Dept. P, 128 W. Washington Blvd., Ft. Wayne, Ind.

▲ For more details circle NED-433 K8 on enclosed inquiry slip ▲

Need a rotary joint?

. . . for water-cooled or steam-heated rolls . . .





JOHNSON Rotary Pressure JOINTS

Type SB illustrated is completely self-supporting. For fully engineering data write for Bulletin S-3002.

Johnson started the whole idea . . . is far ahead in know-how, available types and sizes. Johnson Joints are completely packless, need no lubrication or adjustment. Used on dryer rolls, mills, waxers, calenders, slashers, printing presses, etc.—handling steam, water, hot heat transfer oils, Dowtherm, Mansanto Aroclors, etc. Actually serving under pressures as high as 2400 psi. Sizes up to 8".

THE JOHNSON CORPORATION
812 Wood St., Three Rivers, Michigan

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LOW COST INCINERATOR

BURNS TRASH SAFELY OUTDOORS

Only $110.00 COMPLETE

NO INSTALLATION COST

Burn wrappings, sweepings, papers, cartons, packing, rags, food waste, safely outdoors. Scientific draft control ends fire hazards of flying ash, sparks, burning blowing papers. Burns damp, green, or dry refuse to fine ash in any weather. Minimizes smoke and smell, needs no watching. Safe for use 10' from buildings. Stands 52" high x 35" square at base. 10 bushel burning capacity. Complete with hinged hood, ash pan base and grate and cleanout door. Made of aluminized steel (molten aluminum bonded to steel) with replaceable inner steel panel construction for long life. Shipped assembled—weight 170 lbs. Only $110.00 F.O.B. Cleveland. Satisfaction guaranteed. Other sizes available.

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Dept. NE-10 4007 Detroit Ave. Cleveland 13, Ohio

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Our creative engineers have solved the production problems of many manufacturers with ingenious fabrications of soft, flexible plastic. Perhaps we can solve your problem. The possibilities of flexible plastic are boundless. Size or shape are no limitation. We can cut, form, stitch, or thermo-seal any article you need — and equip it with zippers, grommets, snaps, hooks, etc. We have had years of experience in solving the seemingly impossible with practical applications of soft vinyl fabrications. Call on us for advice . . .

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1718 N. 1st ST., MILWAUKEE 12, WIS.

Design and engineering counsel available. Write us for information.

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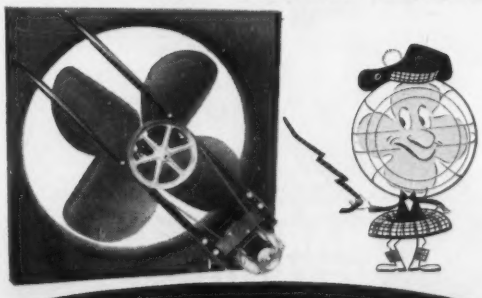
These Tireless Workers

- *CUT DOWN FATIGUE*
- *STEP UP EFFICIENCY*
- *REDUCE LABOR COSTS*



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BELT-DRIVE
EXHAUST FANS

Perfectly balanced, deep-pitched blades exhaust large volumes of air, remove heat, odors, fumes, steam. Keep employees refreshed and working at peak efficiency. EMERSON-ELECTRIC Belt-Drive Ball-Bearing Exhaust Fans will give years of smooth, quiet service at low operating and maintenance costs. Five sizes, 24" to 48", capacities up to 19,400 C.F.M. Direct-drive fans in four sizes, 12" to 24". Ask for Catalog No. F-220. THE EMERSON ELECTRIC MFG. CO., ST. LOUIS 21, MO.

EMERSON-ELECTRIC
of St. Louis • Since 1890

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Now... MUCH MORE

Quality engineered features include:
- Patented leak-proof hydraulics
- 4-1/3" lift in three strokes
- Side thrust free ram
- No-drop handle
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- Pallet entry rollers
- Sectional steel forks
- Taper roller bearings

for only $358

Capacities: 2200, 3500, and 4400 lbs. Choice of steel, aluminum, rubber, nylon, or plastic wheels.

New MULTITON STEIN BOCK FULLY HYDRAULIC PALLET TRUCK

Write for complete information

STOKVIS EDERA & CO., inc.
Dept. No. P10E, 18 Secatoag Ave., Port Washington, N. Y.

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The OFFICE VALET

Answer the Wraps Problem in Offices and Waiting Room

These efficient VALET Racks keep wraps off waiting room chairs, aired, dry and in press. Hold coats spaced apart, hats, umbrellas and overshoes. Accommodate 3 persons per running foot. Come in lengths of 3 ft. 3 in. or longer by the foot. The S-6 Office Valet costumer accommodates 6 people—ends piling of garments on others. Will not tip over. Built for lifetime service of heavy gauge, welded furniture steel. Smart in modern baked enamel finishes. Units form a complete system of wardrobe equipment that provides efficient wrap accommodation wherever people gather.

Write for Bulletin OV-8

VOGEL-PETERSON CO.
1121 West 37th Street Chicago 9, Illinois

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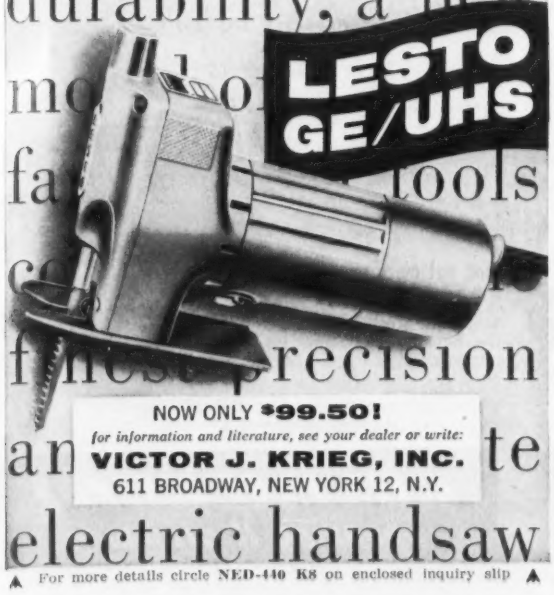
For unsurpassed performance and durability, a new m[illegible] of fa[illegible] tools c[illegible] fine[illegible] precision an[illegible]te electric handsaw



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for information and literature, see your dealer or write:
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611 BROADWAY, NEW YORK 12, N.Y.

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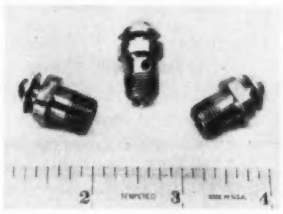
MULTIPURPOSE STEP LADDER
converts to extension and other uses

This versatile Extend-A-Step ladder quickly converts from a step ladder to an extension type, a stairwell unit, a ladder for sloping ground, or into two separate ladders. It features truss-rod and knee-braced steps, safety spreader hinges to prevent pinched fingers, and zinc-plated hardware. Available sizes from 4 to 8 ft extend to lengths from 5 ft 5 in. to 13 ft 5 in. Made by **Patent Scaffolding Co.**, 38-42 12th St., Long Island City 1, N. Y.

▲ For more details circle NED-441 K8 on enclosed inquiry slip ▲

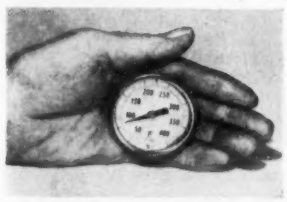
POPPET BLEEDER VALVE
operates on 0-150-psi gas pressures



Stainless steel body, neoprene O-ring seal, and chrome plated pushbutton head are features of the V8B-2 poppet bleed off valve. Valve operates effectively on most bleed control applications, although it is designed primarily as a pneumatic control circuit component. It operates on 0 to 150-psi gas pressures and has 3/32-in. diameter orifice. Pushbutton head responds to axial, angular, or perpendicular forces. Body is threaded to 1/8-27 NPT. Made by **Hause Machines, Inc.**, 809 S. Pleasant St., Montpelier, Ohio.

▲ For more details circle NED-442 K8 on enclosed inquiry slip ▲

DIAL THERMOMETER
2-in. size in several ranges



Even from a distance, figures on the American 2-in. bimetal dial thermometer are easily read. Graduations are on a raised ring close to the cover glass and at the same level as the pointer to eliminate parallax error. The pointer is adjustable over the entire range for calibration. Its coil responds quickly to temperature changes, and surrounding silicone fluid speeds heat transfer and dampens vibration. Standard ranges are from −80-120° F to 200-1000° F and from −50-50° C to 100-500° C. Case, ring, and stem are 18-8 stainless steel. Made by **Manning, Maxwell & Moore, Inc.**, 250-60 E. Main St., Stratford, Conn.

▲ For more details circle NED-443 K8 on enclosed inquiry slip ▲

KO9

...the amazing electric motor cleaner!

KO9—your Short Cut to clean electrical equipment—does an outstanding job of cleaning and degreasing motors, generators, controllers, switches, panels, instruments, meters, refrigeration lines, etc.

Cleaning motors is a cinch—all you do is immerse the running motor in KO9, remove it minutes later as clean as new!

KO13 *... YOUR SHORT CUT TO FAST, SAFE CLEANING*

KO13 is a truly sensational general purpose safety solvent that will clean just about everything ... leaves surfaces smooth and sparkling clean!

KO13 quickly removes grease, oil, dirt and grime from metal, wood and paint.

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GARY, INDIANA

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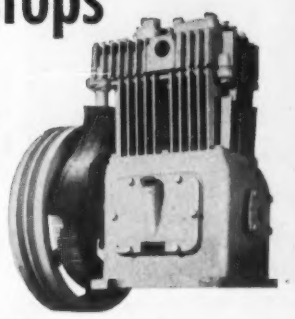
easy starts smooth stops

PROVIDE LONGER SERVICE FROM

Quincy COMPRESSORS



Quincy's automatic loadless starting is the simplest yet — a foolproof hydraulic system tied right in with Safe-Q-Lube —the pressure lubrication that also unloads compressor if oil pressure fails for *any* reason. Loadless starting prolongs belt and motor life — adds to Quincy's over-all economy. Models to 90 C.F.M. — mountings for every need.

SEND FOR CATALOG

QUINCY COMPRESSOR CO., Dept. NED-1058, Quincy, Illinois

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HILD
TRANSFERABLE HEAD VACUUM CLEANERS

30 MODELS AVAILABLE TO SOLVE ALMOST EVERY MAINTENANCE PROBLEM!

Model 455—One horsepower vacuum cleaner with inside filter bag. For use with 1½" or 2" tools.

Model 555—Powerful 1½ horsepower vacuum cleaner for use with 1½", 2" and 3" hose. Motor detachable for use as blower or "Strap-Bak-Vac".

Model 655—Twin 1½ horsepower motors can be used with up to 100' of 1½", 2" and 3" hose. Motor detachable for use as blower or portable vacuum cleaner.

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Gentlemen: Please send me complete information on Hild Transferable Head Vacuums.
☐ Hild Explosion Proof Vacuum Cleaners.
☐ Hild Floor Scrubbers and Polishers.

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How Ni-Rod "55" builds up worn cast iron

...keeps repair cost down

Ni-Rod "55"* can be used to build up worn areas in almost all cast iron parts. Auto, truck, or ship pistons . . . valve seats . . . cylinder walls . . . are just a few. And the cost is just a fraction of what replacement would cost. What's more, with Ni-Rod "55", the repair is done quickly and easily. Welds are strong, sound, highly machinable.

Write for "Repair Cast Iron Parts Quickly and Easily" for the complete Ni-Rod "55" story.

The INTERNATIONAL NICKEL COMPANY, Inc.
69 Wall Street *Registered trademark New York 5, N. Y.

INCO Welding Products
Electrodes • Wires • Fluxes

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Is chip and oil removal your problem?

If your present method removes the oil but does not remove the chips you need the Magnus method.

Let us show you how the double-barreled Magnus method of chemicals + mechanical agitation can remove both oil and chips economically! efficiently! thoroughly!

Write directly to Magnus for Bulletin 10,000G, 13 South Avenue, Garwood, New Jersey.

INDUSTRIAL FINISHING DIVISION
magnus CHEMICAL COMPANY INC.
magnus a world-wide organization specializing in cleaning and protection of all surfaces.

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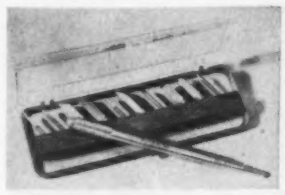
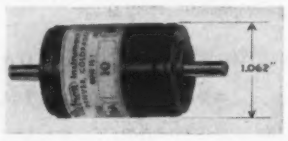
KNIFE KIT
consists of 10 blades and holder



Scraping, cutting, scribing, and scratching jobs relative to silk - screen process work, stenciling, photo retouching, engraving, matt and layout work, ceramics, and carving can be done with this No. 24-1 Craft Kit. Packaged in a styrene plastic box, kit includes 10 different tool steel blades and an aluminum pencil-type holder. Kit will fit user's pocket. It sells for $3. Made by **Griffin Mfg. Co.**, Dept. 24, Lyndhurst & Scio Streets, Rochester 5, N. Y.

▲ For more details circle NED-449 K8 on enclosed inquiry slip ▲

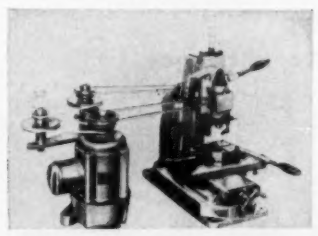
MINIATURE SPEED CHANGERS
ratios from 1:1 to 531,441:1



Over 400 ratios of Series 8 miniature speed changers are available for quick delivery. Black anodized aluminum cases have Size 11 servo-mounts. Input and output shafts run in double heavy duty ball bearings. Countershafts run in self-lubricated, sintered iron and copper bearings. Ratios from 1:1 to 5:1 handle up to 16 oz-in. of torque, and ratios from 6:1 to 531,441:1 handle up to 24 oz-in., measured at low shaft speed. Speeds up to 10,000 rpm at high shaft speed are reached without excessive wear. Maximum power output at the low speed shaft is 0.025 hp. Made by **Metron Instrument Co.**, 436 Lincoln St., Denver 3, Colo.

▲ For more details circle NED-450 K8 on enclosed inquiry slip ▲

MILLING MACHINE
vertical type for small parts



Rapid production of small parts for meters, clocks, and precision mechanical instruments is possible with the Erhard Jauch bench type vertical milling machine. Equipped with automatic feed, the West German made machine produces fine finishes in chatterless operation at high speeds. Any type of milling and recessing work can be performed with milling cutters and twist drills. A micrometer adjustment and a rigid stop permit accuracy to 0.0002 in. Vertical cam-controlled feeding movement features rapid approach, slower feed, stop, and quick spindle return. Feed stroke is adapted to suit requirements. Machine can be furnished with bronze or roller bearings for speeds up to 12,000 rpm. Available from **A. & H. von Tsurikov**, Dept. NED 2, 755 Lake Ave., Rochester 13, N. Y.

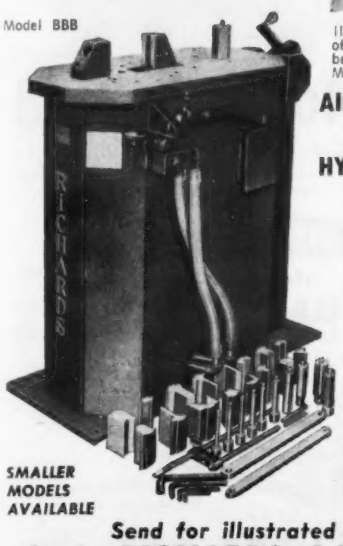
▲ For more details circle NED-451 K8 on enclosed inquiry slip ▲

Multiform

BIG BROTHER BENDER

Illustrated above are a few of the many forms that can be produced efficiently on the Multiform Bender.

Model BBB



SMALLER MODELS AVAILABLE

AIR OPERATED MODELS IN FOUR SIZES
HYDRAULIC—3 MODELS

The heavy duty Big Brother Bender is designed for fabricating bus bars, brackets, fixtures, etc., without special tooling. Air controlled with finger tip response. Comes complete with dies, mandrels and wrenches—punching and blanking dies extra. Will punch holes up to 1" and form material up to ¼" thick by 4" wide. We also build smaller models, hand or air operated, for bending materials up to ⅛" x 1½".

Send for illustrated folder M6

J. A. RICHARDS CO. Myrtle & Pitcher Sts. Kalamazoo, Mich.

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FOR DEFENSE INDUSTRY MACHINIST WORKMAN FARMER

1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition.

WATERLOO METAL BOXES AND CHESTS

Write for FREE book, including complete information.

Waterloo VALVE SPRING COMPRESSOR CO. WATERLOO, IOWA

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INVESTIGATE... Savings obtained through

CUSTOM UPSET FORGING

COMMERCIAL offers years of experience in the design, engineering and production of improved component parts through upset forging. Your most difficult and unusual component problems can be solved efficiently by our engineers. Complete engineering and design service is cost free to you.

COMMERCIAL's complete metal forming service has helped companies in every industry reduce component parts costs. Facilities include 1½" thru the giant 8" upsetters, threading equipment to handle stock up to 6½" in diameter, and rough and semi-finished machining.

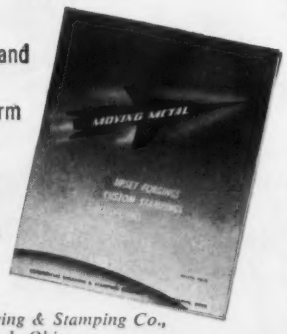
JATO NOZZLE developed for use as a part of a missile has through-pierced hole of varying diameters involving tapers at both ends.

BALL-JOINT HOUSING weighing 80 lbs. produced on 8" upsetter is flanged on one end, belled on the other, and open on both ends. Application involves four-wheel drive earth-moving equipment.

DIFFERENTIAL BULL-PINION GEAR upset forging for heavy duty tractor has through-pierced center hole approximately 11" long.

Upset Forging offers these advantages:

- Metal Saving
- Improved Structure and Surface Quality
- Greater, More Uniform Strength of Section



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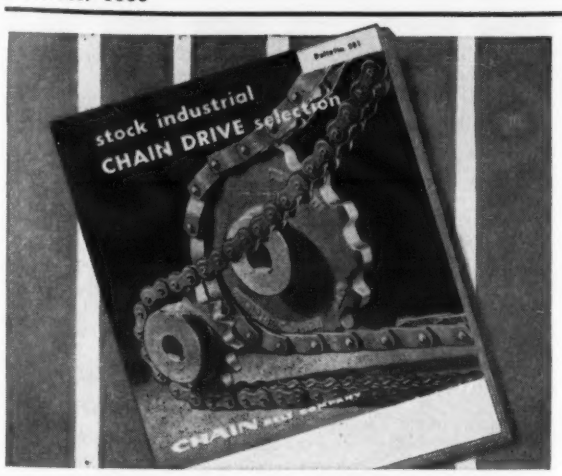
Send today for informative booklet 900-P2 on upset forgings, stampings, and rotoforms.

Write Commercial Shearing & Stamping Co., Dept. J-40, Youngstown 1, Ohio.

COMMERCIAL shearing & stamping

▲ For more details circle NED-452 K8 on enclosed inquiry slip ▲



You can select stock chain drives!

You can translate *your* horsepower requirements...*your* shaft sizes and speeds...*your* load classification...*your* space limitations...into the right size and type of drive chain and sprockets with CHAIN Belt's new Bulletin 581. It's simple and fast. You select from easy-to-read tables the exact chain needed for *most economical* service.

Send for Bulletin 581 today. CHAIN Belt Company, 4686 West Greenfield Avenue, Milwaukee 1, Wisconsin.
In Canada, write CHAIN Belt (Canada) Ltd., 1181 Sheppard Ave. East, Toronto, Ontario.

CHAIN BELT

▲ For more details circle **NED-455 K8** on enclosed inquiry slip ▲

Snap-on® BOXOCKETS®

STRONGEST, SAFEST wrenches you can use

Complete size ranges in 14 different types to fit every possible nut-turning job.

Write for your new *Snap-on* catalogue containing complete boxocket listings.

SNAP-ON TOOLS CORPORATION
8110-J 28th Avenue • Kenosha, Wisconsin

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Write for your copy of Speedline Catalog TODAY

FLANGE WITHOUT WELDING

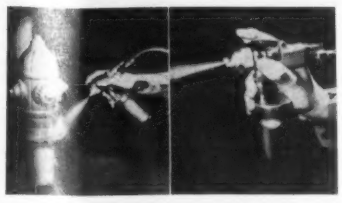
Leakproof joints every time *without* welding... *faster, lower cost* pipeline assembly—when you use the Speedline Insert Flange. Learn how the *complete line* of Speedline stainless steel fittings offers a degree of process line efficiency and economy not possible with conventional fittings!

Distributors are located in principal cities from coast to coast

Speedline® STAINLESS STEEL FITTINGS
® Reg. T. M. manufactured by
HORACE T. POTTS CO. 532 E. Erie Ave. Phila. 34, Pa.

▲ For more details circle **NED-457 K8** on enclosed inquiry slip ▲

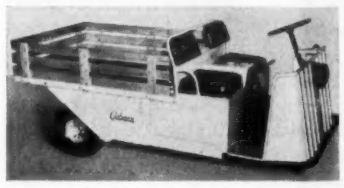
MINIATURE SPRAY GUN for light finishing and touch-up



Equipped with a 4-oz siphon cup, Mini-Rod miniature spray gun is also usable with a pressure feed tank. This pushbutton controlled hand gun is especially suited for small products finishing and touch-up operations. Finger tip snap action adjusts the fan control for either of two adjustable spray patterns—cone to wide fan or cone to narrow fan. Made by **Eclipse Air Brush Co.**, 421 Park Ave., Newark 7, N. J.

▲ For more details circle **NED-458 K8** on enclosed inquiry slip ▲

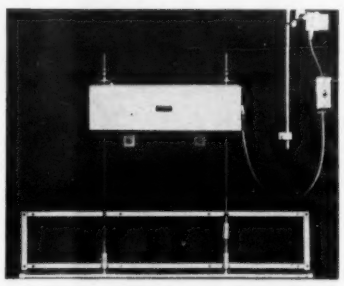
FLAT BED TRUCK electric model carries 1000 lb



Two forward and one reverse speed are provided on the Truckster flat bed electric truck. It is capable of carrying a 1000-lb load, plus operator and passenger, through 50-in. passageways. The three-wheel unit has automotive type steering, hydraulic brakes, over 19 sq ft of cargo space, and batteries good for 80 miles of travel. Color is safety orange or yellow. An all-weather cab and extra personnel seat are optional. Made by **Cushman Motors**, 2934 Guardian Bldg., Detroit 26, Mich.

▲ For more details circle **NED-459 K8** on enclosed inquiry slip ▲

AUTOMATIC PRESS CONTROL acts as an emergency stop



The Electro - Sensitive control bar for punch presses functions as a fast emergency stop when anything goes wrong with the dies or work, or if operator's hand is in danger zone when ram descends. Main control box is mounted directly on the ram and has a retractable "trigger-bar" extending entirely across the front which precedes the ram on the downstroke. Where projecting fixtures prevent control bar from moving downward past the bolster, a disconnect switch is available to cut out the control circuit just as bar reaches the bolster. Plastic shield mounted on the horizontal bar encloses the danger zone. Made by **W. I. Martin & Co.**, Dept. 17, 3059 W. Armitage Ave., Chicago 47, Ill.

▲ For more details circle **NED-460 K8** on enclosed inquiry slip ▲

TINSLEY THICKNESS GAUGE

DUAL-SCALE

A simple and inexpensive gauge for measuring the thickness of non-magnetic coatings such as paints or plating on ferrous bases.

FEATURES

- Easy to use and carry
- Will determine thickness on radii (irregular or curved surfaces present no problem)
- Not affected by vibration and temperature—special Alcomax magnet used
- Negligible error, if any, if used in vertical upside down position, or horizontally
- Will not damage coatings
- An additional scale for special calibrations is on the reverse side of each gauge.

Range: 0.0002 to 0.015 inches (or 0-400 microns)

Mean Accuracy: ± 15% or 0.0001 inch whichever is greater.

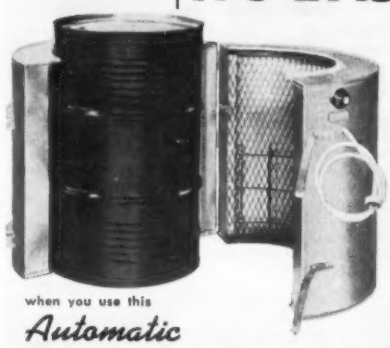
Write for BULLETIN 23P1-D

B-606

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

▲ For more details circle **NED-461 K8** on enclosed inquiry slip ▲

It's EASY to Remove Viscous Materials from Steel Drums with NO HOT SPOTS



when you use this *Automatic* **ELECTRIC DRUM WARMER**

Whether it's by dipping, pouring or pumping, this portable electric oven makes removal of contents of metal drums fast, easy and convenient. Thermostatic control permits economical continuous operation WITHOUT SUPERVISION. Insulated hinged halves give easy access for handling drums. Sizes for: 55, 30, 16 and 14 gallon drums. For 115 volts, single phase; 208, 230 and 460 volts, single or three phase. Special sizes, and/or special voltages on request. Phone or write for latest literature.

HAROLD L. Palmer COMPANY
28625 GRAND RIVER, FARMINGTON, MICH. PHONE GReenleaf 4-4350

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ANOTHER PANNIER MASTER MARKER!

PANNIER'S INSPECTORS' HAMMERS WEAR LONGER

Many styles and sizes for metal marking. Letters, numbers or symbols on either or both ends; interchangeable type heads available.

Write for data.

MONEY-SAVING FEATURES:

- Sturdy, balanced construction
- Long-lasting tool steel head
- A style for every (any) need
- Sharp, clean marking

BIRTHMARKED MATERIALS

MARKING DEVICES
THE PANNIER CORPORATION
301 SANDUSKY STREET PITTSBURGH 12, PA.
Offices: Los Angeles • Cleveland • Chicago • Philadelphia • Birmingham

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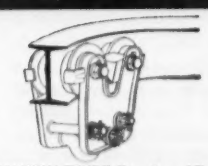
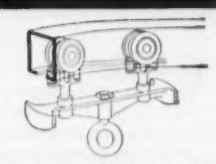
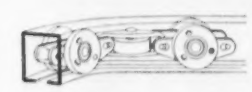
R-W OVERHEAD CONVEYORS
. . . a type and size to meet your exact requirements!



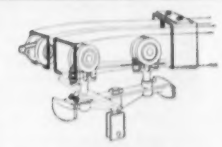
R-W "TRU-TRED" Overhead Track Systems . . . heavy-duty Monorail Systems capable of carrying up to 8,000 lbs. Available in a complete range of sizes. Designed to provide years of dependable trouble-free operation. Request Catalog No. A-64.



R-W "SAFE-RAIL" Overhead Conveyors include a complete range of enclosed trolley track and equipment that will easily handle up to 1,000 lb. loads quickly and efficiently. Request Catalog No. A-94.



R-W "ZIG-ZAG" Continuous Powered Conveyors. Extremely flexible . . . carries unit loads up to 125 lbs. Economical to purchase and install. Easily modified, relocated or extended by plant personnel. Request Catalog No. A-93.



R-W "TWIN-TRAK" Overhead Automatic Dispatch System consists of one or more power tracks and as many free or storage tracks as desired. Provides automatic selective control over product movement through an entire plant. Request Catalog No. F-192.

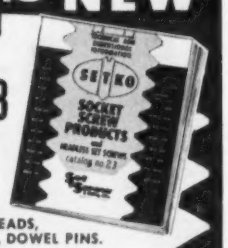
RICHARDS-WILCOX MFG. CO.
435 W. THIRD STREET • AURORA, ILLINOIS • Branches in Principal Cities

▲ For more details circle **NED-464 K8** on enclosed inquiry slip ▲

now! get this NEW

problem-solving money-saving

Setko Catalog 23 FREE



- INCLUDES NEW SELF-LOCKING SET SCREW SELECTOR CHART
- LATEST STYLES OF SOCKET SCREWS INCLUDING: BUTTON HEADS, FLAT HEADS, SHOULDER SCREWS, DOWEL PINS.
- COMPLETE INFORMATION ON THE COST-CUTTING SETKO HOPPER FEED METHOD OF INSERTING SET SCREWS.

Lists all standard set screws and socket screw products . . . plus many special types designed for unusual conditions of vibration; close precision setting, resistance to tampering, etc. Describes many specific ways in which Setko Set and Socket Screw products cut costs and improve product quality.

Partial Contents of New Setko Catalog 23:

- Hopper-Fed Headless Set Screws, with New Automated Feed System
- Self-Tapping Set Screw Standard Hexagon Socket
- Zip-Grip Self-Locking®
- Nu-Cup Set Screws® Self-Locking Offset
- Point-Lok, Flush-Lok, Spred-Lok®
- Isothermal Heat-Treated Set Screws
- Stainless Steel Set Screws, Cap Screws, Button Heads, Flat Heads, Shoulder Screws, Dowel Pins and Pipe Plugs

*Indicates Setko Set Screw "Firsts"!

Set Screw & Mfg. Co. send for FREE catalog 23 today!

Use letterhead—or write name and address in margin of this page, tear out ad and mail.

130 Main Street, Bartlett, Illinois (Chicago Suburb)

We Specialize in Solving Puzzling Set Screw Problems

▲ For more details circle NED-465 K8 on enclosed inquiry slip ▲

TEAL rocket designed by TEMCO AIRCRAFT CORP., Dallas

What's the coolest insulator for hot products?

FORMICA® laminated plastic . . . withstands 2500° F for 8 minutes in the Navy's XKDT-1 rocket drone. A modified standard Formica grade successfully insulates the solid propellant engine case and blast tube against this inferno.

This is the heat insulator Formica research developed by combining great mechanical strength with high heat resistance. It has helped break the heat barrier in aviation, missile and space craft.

This type of heat insulator can be useful in your hot products, too. In fact, product designers are getting more "assists" from Formica laminated plastics than any other material. Standard grades available for immediate use in your projects . . . without extensive delays for research and development. Forty-eight hour Streamliner shipment of most grades. For further information, write for bulletins 829 and 856-A. Formica Corporation, subsidiary of American Cyanamid, 4551 Spring Grove Ave., Cincinnati 32, Ohio.

FORMICA® Laminated Plastic a product of CYANAMID

FI-1966A

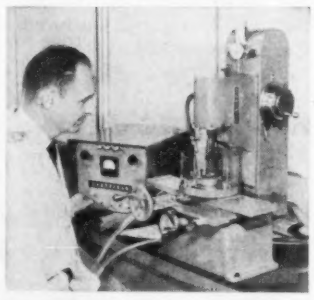
▲ For more details circle NED-466 K8 on enclosed inquiry slip ▲

CENTERLESS FORM GRINDER
duplicates circular formed parts

Precise duplication and high speed production of circular formed parts is possible with this Model PG-7 centerless form grinder. It can be used for making such products as bobbins, balls, knobs, handles, bearings, seals, spindles, and insulators from ferrous and nonferrous metals as well as plastics, cork, wood, rubber, and ceramics. Automatic hopper feed is possible with parts ranging from 0.156 to 1.125-in. diameter. Diameters to 5 in. can be handled with manual feed. Preformed work grinding wheel forms part supported on the regulating wheel which is advanced hydraulically. Finished part drops out of machine automatically. Usable wet or dry, machine has automatic cycle. Made by **Glebar Co.**, Commerce St., Franklin Lakes, N. J.

▲ For more details circle NED-467 K8 on enclosed inquiry slip ▲

ULTRASONIC MACHINE TOOL
compact, bench type unit cuts, drills, and engraves hard metals



Germanium, silicon, ferrite, hardened steel, and carbide can be machined accurately and economically with this Sheffield-Cavitron No. 200-B2 ultrasonic machine tool. Requiring less than 2 x 4 ft of bench space, it has an effective machining area ranging from 1/64 to 1 in. Typical operations performed include cutting, drilling, engraving, slicing, dicing, and production of complex shapes and forms. On special applications, materials similar to soft steel can be machined.

The machine tool utilizes a magnetostrictive transducer to provide up to 25,000 machining strokes per second. It is powered by a 110-v, 60-cycle ac electronic generator supplying 250 w output. An automatic tuning device in the generator senses and compensates for tool wear. Vertical tool adjustment is 2 in. An 8-in. diameter work chuck is mounted on the table which has 8-in. longitudinal and 6-in. cross slide adjustments. Made by **Sheffield Corp.**, 721 Springfield St., Dayton 1, Ohio.

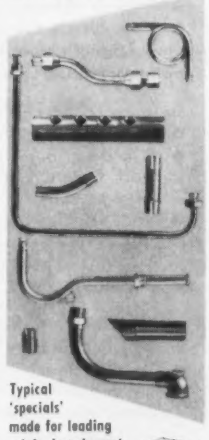
▲ For more details circle NED-468 K8 on enclosed inquiry slip ▲

It's "TRENTON!"

for TUBULAR and PIPE ASSEMBLIES for the ORIGINAL EQUIPMENT MANUFACTURER

Manufacturers of original equipment will find it profitable to specify TRENTON TUBULAR PRODUCTS DIVISION as their source for fabricated TUBULAR ASSEMBLIES, COMPONENTS, AND SPECIAL BENDS, as well as BRASS, COPPER, ALUMINUM AND PLASTIC PIPE NIPPLES.

- Prefabricated assemblies save production time.
- Competitive prices.
- 41 years of manufacturing know-how.
- Modern, high-speed equipment for threading, machining, bending and brazing.
- Over 1,0000,000 brass nipples regularly stocked.

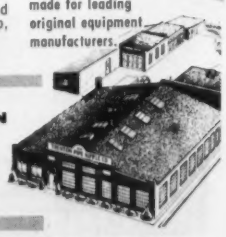


Typical 'specials' made for leading original equipment manufacturers.

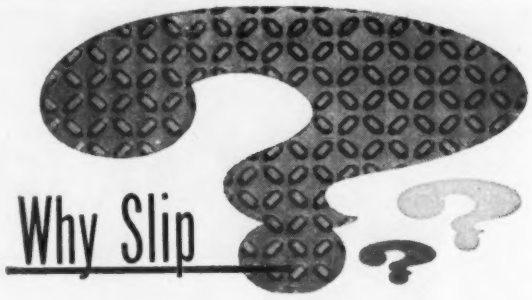
Trenton assures you tubular assemblies WHEN and AS you want them. Send sample or blue print. Also, request Catalog #756.

TRENTON

TUBULAR PRODUCTS DIVISION
TRENTON PIPE NIPPLE COMPANY
MANUFACTURERS OF "The Quality Line"
628 BRUNSWICK AVENUE TRENTON, NEW JERSEY
EXport 3-1341-2 Teletype TREN 8584



▲ For more details circle NED-469 K8 on enclosed inquiry slip ▲



Why Slip

. . . when there's USS Multigrip

Eliminate dangerous—and potentially costly—slippery areas in your plant with USS Multigrip Floor Plate. You can do this because Multigrip Floor Plate has clean-edged, flat-topped risers that give positive traction to feet and wheels. These tough steel plates won't chip, crack or splinter and they're kept clean with hose or broom. On ramps, stairs, aisles, platforms, or floors—wherever you need durability plus safety . . . you need Multigrip Floor Plate. It's available in large plates, eliminating installation waste. United States Steel, 525 William Penn Place, Pittsburgh 30, Pa.

USS and Multigrip are registered trademarks.

Sold by leading distributors from coast to coast.

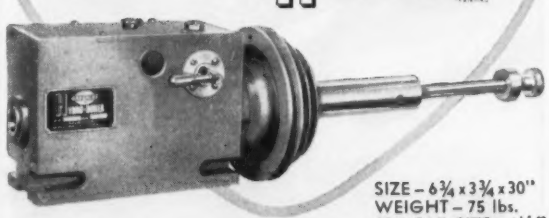
USS United States Steel

ARMSTRONG-BRAY
GEAR and WHEEL PULLERS

▲ For more details circle NED-470 K8 on enclosed inquiry slip ▲

PRECISION BORING IN LIMITED SPACE

GREENLEE Model S-6 HYDRO-BORER



SIZE – 6¾ x 3¾ x 30"
WEIGHT – 75 lbs.
SPINDLE SIZE – 1¼"

Vertical, Angular or Horizontal Installations

Here's a low cost, compact, precision boring machine that combines versatility and accuracy! Bores to extremely close tolerances. Compact design makes it ideal for applications where space is at a premium. Mount it vertically, angularly or horizontally on workholding fixtures or assembly jigs. Patented feed principle assures high quality finish. Write today for further information!

GREENLEE BROS. & CO.
2250 MASON AVENUE
Rockford, Illinois

▲ For more details circle NED-471 K8 on enclosed inquiry slip ▲

Solder pot gives accurate response to repeated overloads, yet prevents nuisance tripping. Each unit is individually factory-tested and calibrated...Completely tamper-proof.

Heat-producing element is integral part of overload unit. It's permanently joined to solder pot, can't become misaligned.

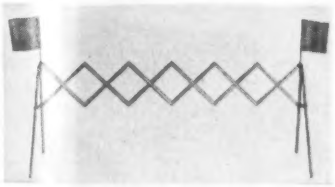
Write for Bulletin SM-275 to get the complete story on Square D melting alloy thermal overload relays. Square D Company, 4041 N. Richards Street, Milwaukee 12, Wis.

NOW...EC&M PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

▲ For more details circle NED-472 K8 on enclosed inquiry slip ▲

EMERGENCY BARRICADE
stands 36 in. high, extends 8 ft



A practical traffic aid, the Guard-Gate metal fold-up emergency barricade stands 36 in. high and extends to 8 ft. It collapses to 9 in. when not in use and can be carried easily. It can be set up quickly wherever needed in industrial plants or roadways to warn of emergency conditions. Barricade is shipped in boxed kit form. Cross bars are brilliant yellow and flags are red. Made by **West Side Iron Works, Inc.**, 333 Front Ave. N.W., Grand Rapids 4, Mich.

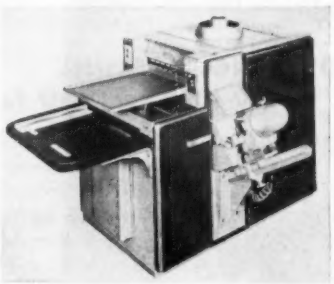
▲ For more details circle NED-475 K8 on enclosed inquiry slip ▲

SAFETY SIGN
has illuminated signals

Lost - time accidents are signaled and the number of accident-free days are indicated by the 2 x 5-ft Saf-T-Sign, available in single or double - face models. Made of porcelain enamel on steel, the red, green, and white sign has interior-illuminated plastic bull's-eye signals. It is easily installed and can be seen for long distances. Made by **Texlite, Inc.**, 3307 Manor Way, Dallas 9, Tex.

▲ For more details circle NED-476 K8 on enclosed inquiry slip ▲

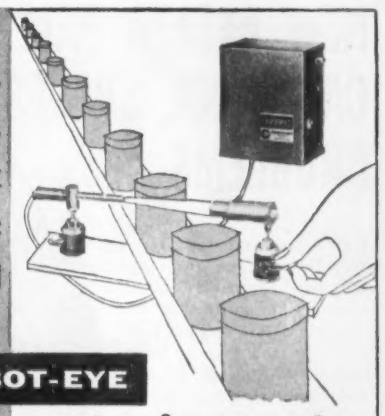
ENLARGER-PRINTER
for microfilm reproduction



Records which have been reduced to 35-mm microfilm size can be enlarged from 14 to 16 times and reproduced in a continuous process by the Copytron Model 1000 enlarger-printer. It prints black-on-white enlargements on standard size sheets from 8½ x 11 in. to 18 x 24 in. Finished prints, delivered at the rate of about four per minute, will receive writing, drawing, or typing. Machine accommodates reel, strip, or card-mounted microfilm and has a magnifying scanner for previewing the image before printing. Copytron machine uses the electrostatic printing principle to make an enlargement which also can serve as a short-run master for making up to 50 additional reproductions on an offset printing machine. Made by **Charles Bruning Co.**, Dept. NEDI, 1800 W. Central Rd., Mt. Prospect, Ill.

▲ For more details circle NED-477 K8 on enclosed inquiry slip ▲

versatile, miniaturized, low-cost photo-electric control



ROBOT-EYE

counts, sorts, inspects

RE-2 (2 pc. unit, no counter)	$44.50
RE-3 (3 pc. unit, no counter)	65.00
RE3-C4 (with 4-digit counter)	84.00
RE3-C6 (with 6-digit counter)	88.00

standard INSTRUMENT CORP.
657 BROADWAY
NEW YORK 12, N.Y.

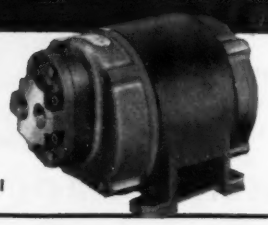
Accurate — follows most rapid operations.
Trouble-Free — Proven for years in industry.
Easily-Installed — with universal mount.
Miniaturized — for use in smallest space.

To learn how Robot-Eye can help cut your production costs, write for Brochure BP-10.

▲ For more details circle NED-479 K8 on enclosed inquiry slip ▲

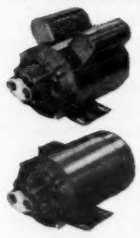
New Additions to
ROPER T SERIES

CHOICE OF 192 MODELS



.3 to 55 GPM - to 400 PSI

COMPACT, INTEGRAL PUMP and MOTOR UNITS
For Hydraulic, Pressure Feed, Transfer Work



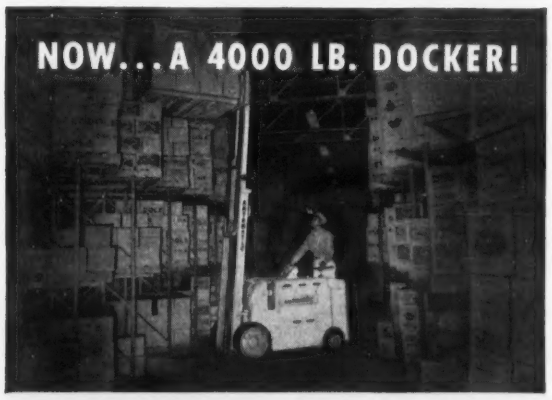
Compact, lightweight, "all-in-one" units with pump serving as end bell of motor. No coupling required — saves space. Furnished with open drip proof or totally enclosed standard NEMA motors, single or three phase. Send for Bulletin 31 today!

- COMPLETE, COMPACT UNITS
- LOW FIRST COST
- MOUNT IN ANY POSITION
- LONG LIFE SERVICE

ROPER HYDRAULICS, INC.
670 Blackhawk Park Ave.
Rockford, Illinois

ROPER ROTARY PUMPS

▲ For more details circle NED-473 K8 on enclosed inquiry slip ▲



Automatic Adds New Rear End Control Docker with 8-way Superiority Plus Higher Capacity

This new, high quality piece of equipment, Model FFEH, is designed specifically for handling loads up to 4000 lbs., 48" long, in close quarters. It has the same 8-point superiority characteristic of all Dockers: (1) faster lift and travel for higher productivity; (2) lower center of gravity and 4-wheel suspension for greater safety; (3) shorter, more compact chassis for easy maneuvering; (4) higher grade clearance increases operating range; (5) shorter turning radius improves maneuverability; (6) lower step height and rear end control enable operator to get on and off easily and safely; (7) heavy duty Class-H Silicone insulated motor insures maximum heat protection; (8) greater visibility when maneuvering.

Capacities: 1500, 2000, 3000 and 4000 lbs. Convenient lease or purchase plans. Write for details...no obligation.

Automatic Electric Industrial Trucks
Cost Less to Own...Less to Operate

AUTOMATIC TRANSPORTATION COMPANY
Division of The Yale & Towne Manufacturing Company
61 West 87th Street—Dept. T-8—Chicago 20, Illinois

Electric Automatic Industrial Trucks

WORLD'S LARGEST EXCLUSIVE BUILDERS OF ELECTRIC-DRIVEN INDUSTRIAL TRUCKS

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NAMES IN THE NEWS!
Jupiter! Redstone!
Missile Development Centers are among the largest Government Defense users of Produc-Trol for research, production, manpower and other types of scheduling.

PRODUC-TROL Visual Control
not only schedules, But automatically checks with TIME, LINE and COLOR control

- Original cost and upkeep low.
- Schedules and time checks operations.
- Historical record to back it up.
- Bad situations show automatically.
- Its simplicity has put it into world-wide use.
- Analyze 100 items in 10 seconds.

Creator of Effective Tools for Effective Management

Phone Westport, Conn. CA 7-4111 or write
WASSELL ORGANIZATION, INC.
Westport, Conn.

Please send Free Booklet on Produc-Trol. NED
NAME ..... COMPANY.....
ADDRESS .....
CITY ..... STATE.....

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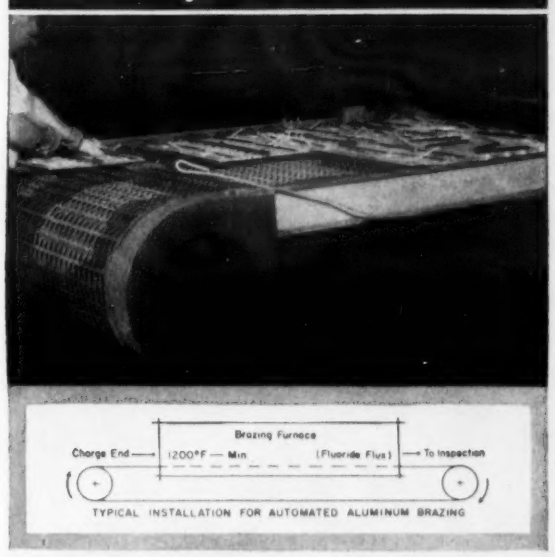
Cambridge WOVEN WIRE BELTS



METAL-MESH BELT CONTROLS PRODUCT UNIFORMITY IN CONTINUOUS BRAZING

Here's a belt that not only shrugs off hot, corrosive atmospheres, but helps process metal parts more uniformly—and in less time. Moving continuously through the furnace, the Cambridge Belt allows heat to circulate freely through its open mesh and around the product for thorough treatment.

No matter what you process—food, chemicals, metals or ceramics— through hot, cold, dry or wet operations —Cambridge Belts can help you increase production and lower operating costs. Here's how:

CONTINUOUSLY MOVING BELTS ELIMINATE BATCH PROCESSING—give faster, more economical production; reduce slow, costly manual handling.

ALL-METAL CONSTRUCTION IS HEATPROOF, COLDPROOF, ACIDPROOF—Cambridge belts can be woven from any metal or alloy to take sub-zero or up to 2100° F. temperatures, yet remain impervious to corrosive atmospheres or solutions.

OPEN MESH PROVIDES FREE AIR, LIQUID CIRCULATION—gives more uniform processing of product; grit, sand, quench solutions drain through belt immediately.

SPECIAL SURFACE ATTACHMENTS AVAILABLE—raised edges or cross flights hold product on belt during movement.

Ask your Engineering Department to contact your Cambridge Field Engineer soon. He's listed under "BELTING-MECHANICAL" in your classified phone book. He can recommend the belt size, mesh or weave, in the metal or alloy best suited to your operation.

Write for your PERSONAL COPY of 130-PAGE REFERENCE MANUAL illustrating ways in which other manufacturers have employed Cambridge belts, and including design information.

The Cambridge Wire Cloth Company

WIRE CLOTH | METAL-MESH CONVEYOR BELTS | WIRE CLOTH FABRICATIONS

Department C,
Cambridge 10,
Maryland

OFFICES IN PRINCIPAL INDUSTRIAL CITIES

▲ For more details circle NED-480 K8 on enclosed inquiry slip ▲

NEW FAFNIR BALL BEARING CARTRIDGE SOLVES SPACE PROBLEMS...

Fafnir's new space-saver two-bolt flange cartridge offers a rugged-duty ball bearing mounting for use where space is limited. Durable cast iron housing incorporates Fafnir self-aligning wide inner ring ball bearing with self-locking collar in completely assembled package. Bearings in LCJT cartridges are equipped with Mechani-Seals, slinger type. RCJT cartridges contain bearings equipped with Plya-Seals, contact type. Both types are prelubricated . . . usually need no further lubrication. However, grease fitting can be installed for special needs. Available for shaft diameters from ½" to 1 15/16". For details write the Fafnir Bearing Company, New Britain, Connecticut.

LCJT Type with Mechani-Seals

RCJT Type with Plya-Seals

FAFNIR BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

▲ For more details circle NED-483 K8 on enclosed inquiry slip ▲

Free Demonstration Anywhere in Your Plant

See proof that the 'Budgit' Chain Block can cut your load handling costs

Be convinced — take us up on this free offer. Choose any area where lifting is a problem and a hoist can be hung. Then call your local 'Budgit' distributor. See the yellow pages of your phone book — or write us for the name of the one nearby. He will bring and hang up a 'Budgit'. He will prove hoisting is an easy one-man job that frees manpower for other work.

'BUDGIT' SAVES TIME, ENERGY, MONEY

You will learn how only 25 lbs. of muscle effort can lift a 500 lb. load. You will see how fast the big, automatic load brake operates in spotting loads exactly where you want them. You will learn how light weight and strength are combined to produce a safe hoist that cuts your lifting costs.

'Budgit' Aluminum Chain Blocks are made in ¼ to 10-ton capacities, in top hook and Army-Type trolley styles. Spark and corrosion resistant models, too. Prices start at $125.

Call your Shaw-Box distributor today or ask us for Bulletins 15010-10, 15010-16, 15010-17, 15010-18. No obligation.

Authorized service stations from coast to coast save time, trouble and money for every 'Budgit' user.

58C-1

'Budgit'® CHAIN BLOCKS

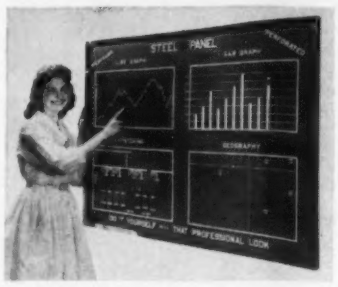
MANNING, MAXWELL & MOORE, INC.
Shaw-Box Crane & Hoist Division
400 W. Broadway • Muskegon, Michigan

Builders of "SHAW-BOX" and 'LOAD LIFTER' Cranes, 'BUDGIT' and 'LOAD LIFTER' Hoists and other lifting specialties. Other Divisions produce 'ASHCROFT' Gauges, 'HANCOCK' Valves, 'CONSOLIDATED' Safety and Relief Valves, and 'AMERICAN' and 'AMERICAN-MICROSEN' Industrial Instruments.

In Canada: Manning, Maxwell & Moore of Canada, Ltd., Galt, Ontario

▲ For more details circle NED-484 K8 on enclosed inquiry slip ▲

PERFORATED BULLETIN BOARD steel unit takes ink, tape, letters



Graphs, production control charts, fluid maps, plant layouts, process charts, dispatching information, and material flow patterns are among the uses for the Perframe perforated steel bulletin board. The 36 x 48-in. board is perforated on ¼-in. centers and mounted in a chromium plated steel frame. Painted surface is a medium green. Cloth and plastic pressure-sensitive tape, paper letters and figures, standard and special symbols, india ink, plastic headed pins, and magnets can be attached and removed without damage to the board. A small light can be mounted without drilling. Photo illustrates some of the board's uses. Made by **Power Dispatchers Equipment Co.**, Box 1947A, Milwaukee 1, Wis.

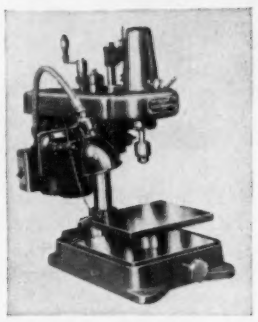
▲ For more details circle NED-485 K8 on enclosed inquiry slip ▲

CORROSIONPROOF FAUCET made of high-density polyethylene plastic

Usable in polyethylene tanks and other vessels, this high-temperature high-density polyethylene faucet facilitates draining of corrosive liquids. It is made in the ¾-in. size and screws in a tapped hole. Tight shut-off is assured. Made by **American Agile Corp.**, Dept. E, Box 168, Bedford, Ohio.

▲ For more details circle NED-486 K8 on enclosed inquiry slip ▲

DRILLING MACHINE 750-6000 rpm unit for small holes



Small holes in any material can be drilled by Model AF-7B sensitive drilling machine which has a capacity of No. 0 to 5/16-in. diameter drills. It will drill to the center of a 11¾-in. circle, and head can be moved through a complete circle. Vertical travel of head is 8 in., and spindle travel is 2⅜ in. A 5½-in. diameter round table is standard. Belt - driven speeds are 750, 1500, 3000, and 6000 rpm. Drill is powered by a ¼-hp, 110-v single-phase, 60-cycle motor. A 7 x 9-in. rectangular table, illustrated, which fits over the round table is available. Made by **High Speed Hammer Co.**, 315 Norton St., Rochester 21, N. Y.

▲ For more details circle NED-487 K8 on enclosed inquiry slip ▲

mark any wire — faster, at lower cost!

BRADY PERMA-CODE WIRE MARKERS

Self-sticking — go on fast to any type wire. Tell which wire goes where. Cost less than ⅛¢ per lead. All-vinyl, polyester film, glass cloth, aluminum foil, vinyl-cloth. Color coded to meet NEMA specifications.

Write for free working samples — and Bulletin 130.

W. H. BRADY CO.
781 West Glendale Avenue • Milwaukee 9, Wisconsin • Est. 1914

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SHAWMUT'S TIME-TESTED SILVER-PLATED Tri-onic®

(Dual-Element)
The General Purpose Fuse

*Interrupting Capacity 25,000 Amps. A.C.

KEEPS MOTOR CIRCUITS SAFE

This is the first low voltage fuse with a published interrupting capacity of 25,000 Amps. (15,000 Amps. more than required by U.L. Standard for fuses.) For real protection use it in place of all ordinary types of fuses.

TRI-ONIC GIVES 3-WAY PROTECTION

1. **HIGHER INTERRUPTING CAPACITY.** 25,000 A. @ 250 V & 600 V. Handles short-circuits 2½ times larger than ordinary fuses. Expands fuse application into 25,000 Amp. zone. Use it on bus plug-in duct, bus-ways, feeders, motor control panels, branch circuits.
2. **LONG TIME-DELAY.** Safely starts heavily loaded motors without blowing. Prevents circuit "outage" caused by heavy motor-starting currents or load swings. Provides "matched" protection for your motors.
3. **COOLER OPERATION.** Runs cool because of silver-plating and low I^2R losses throughout. Opens at 286° F. or 500° lower than ordinary zinc links. Ideal for distribution and panel boards, motor branch circuits, knife and enclosed switches.

* U.S. Patent Nos. 2,111,749 – 2,300,620 2,321,711

Insist on TRI-ONIC. Ask for TRI-ONIC Bulletin today.

Tri-onic - *Awake At The Switch*

THE CHASE-SHAWMUT CO.
374 MERRIMAC STREET • NEWBURYPORT, MASSACHUSETTS
Subsidiary of I-T-E CIRCUIT BREAKER CO., Philadelphia, Pennsylvania

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ROLL PRECISION THREADS AT LOW COST

on a No. 00 Brown & Sharpe Automatic with the PRECISION-ROL Attachment, Model 250

FEATURES

- Rolls up to ½" of threads from No. 0-80 to ¼-20
- No changes in the machine necessary
- Eliminates "Bump Rolling"
- Rolls easily changed and adjusted for size
- Easy to match rolls accurately to produce correct thread form
- Rolls automatically position themselves relative to spindle axis or work contact
- Lateral float of the head minimizes side pressure on rolls
- Synchronous roll rotation assured by positive gear train connection

For further information write to The Sheffield Corporation, Dayton 1, Ohio, U.S.A., Dept 13

the SHEFFIELD corporation
of Bendix Aviation
manufacture and measurement for mankind

8115

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New...from RCA

Transistorized... Miniature "Belt" Radio

RCA PERSONALFONE 2-Way Radio

The 2-Way Radio You Wear!

Small transistorized receiver and transmitter are in two handy leather pouches worn on belt. Perfect for guards, maintenance men, mechanics.

Lighter than a walkie-talkie Convenient as a "wrist" radio

Saves time and money!

Get the facts . . . write to RCA, Dept. L-329 Building 15-1, Camden, N. J. In Canada: RCA VICTOR Company Ltd., Montreal.

RADIO CORPORATION of AMERICA
COMMUNICATIONS PRODUCTS
CAMDEN, NEW JERSEY

Tmk(s) ®

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AIR-POWERED *Rotary* WORK FEEDER

Adjustable for 4, 6, 8, 12 or 24 Feeding Stations

Dial feed work pieces to drill presses, punch presses and other tools. Cut cost in half. Bellows Rotary Feed Tables are air-powered, electrically controlled for easy interlock with drill press spindles or press rams. All valves and controls are built-in. Ten inch diameter table top can be machined for mounting jigs and fixtures.

Write for Bulletin RT-1022. Address Dept. NED-1058.

The Bellows Co.
DIVISION OF INTERNATIONAL BASIC ECONOMY CORPORATION
AKRON 9, OHIO

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DO YOU MAKE THIS TEST IN *your* PLANT?

No, chances are you'll *never* have to test the strength of a muscle man in your plant. But the odds are that you *are* testing the *muscles of your machinery* many times daily. The Dillon engineering brochure illustrates many vital tests you can perform with Dillon Dynamometers quickly . . . accurately . . . economically! Write for your copy and price list without cost or obligation *today!*

DILLON DYNAMOMETER SPECIFICATIONS

- Measures tensile, torque, compression, weight
- 13 capacities from 0-500 to 0-150,000 lbs.
- Individually calibrated. Certified accurate
- Low cost, rugged, lightweight
- Complete with max hand, shackles, safety glass crystal
- Protected against accidental overload

W. C. *Dillon* & CO., Inc.
14578NE Keswick St.
Van Nuys 1, Calif.

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LUCKY FELLOW... HE'S SOLVED A PRODUCTION BOTTLENECK!

In any plant, the soldering operation is usually the function that slows down production.

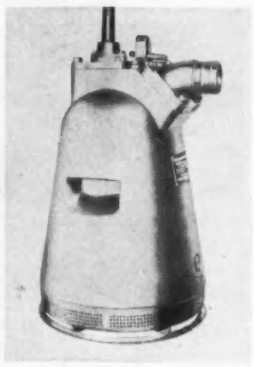
That's why it's just good sense to use the best . . . Kester . . . made by Solder Experts with over 50 years of experience. Kester Flux-Core Solder will do your job in the quickest and best manner.

***Free:** The Kester 78-page Text Book "Solder . . . Its Fundamentals And Usage"*

KESTER SOLDER
Company 4249 Wrightwood Ave. Chicago 39, Ill.
Newark 5, New Jersey
Brantford, Canada

▲ For more details circle **NED-494 K8** on enclosed inquiry slip ▲

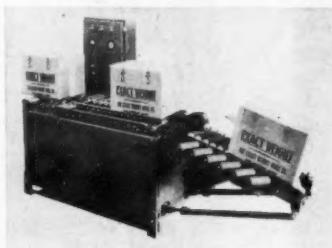
PORTABLE PUMP
submersible, needs no suction hose



Operated by a built-in motor and starting instantly at the flick of a switch, the Flygt portable pump is easily moved since it requires no suction hose. The fully submersible unit can handle a high proportion of solids and will run for long periods without supervision. The Swedish-designed unit, assembled in this country, will drain water down to 1-in. depth and can run dry without damage. Pumping starts again instantly when water flows into the sump. Largest size is the 67-hp Model B-150/200L which weighs 1250 lb and has a capacity of 1500 gpm at a head of 65 ft. Smallest unit is Model B-38L with a 10-gpm capacity against a 65-ft head or 45 gpm at 20 ft. Intermediate sizes are offered. Higher heads can be obtained by running the pumps in tandem. Made by **Stenberg Mfg. Corp.**, North Hoosick, Hoosick Falls, N. Y.

▲ For more details circle **NED-495 K8** on enclosed inquiry slip ▲

CASE & BAG CHECKWEIGHER
accurate to 0.1 per cent on items weighing 20 to 100 lb



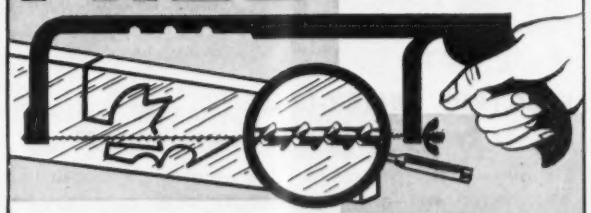
Cases, cartons, and bags weighing from 20 to 100 lb can be checked for weight to within 0.1 per cent accuracy by the Selectrol Model 1250 checkweighing machine. Speeds up to 30 units per minute are possible. Machine is installed in production line and weighs cases or bags in motion. Intake and weigh conveyors are powered.

Machine operates on 1:1 ratio lever principle and is capable of up to 31 weight classifications for segregating commodities, with read-out to printing equipment. Equipment can be furnished for sounding alarm and indicating weight deviations; for segregating under and overweight cases by shunting them from the conveyor line; for continuously recording deviations on 6-in. wide strip chart; for printing weight deviations numerically on paper tape; for initiating control to a bag filling machine; and for counting numbers of units in each weight category.

Machine operates on 115 v, 60-cycle, 1000-w power and air pressure of 60 to 150 psi for the rejector mechanism. Made by **Exact Weight Scale Co.**, 930 W. Fifth Ave., Columbus 15, Ohio.

▲ For more details circle **NED-496 K8** on enclosed inquiry slip ▲

FREE TO INDUSTRIAL USERS . . .
(Limited Time Only)



Demonstrate for yourself the big advantage of now being able to saw up or down, left or right, or in circles with Tyler SPYRAL Hacksaw, Coping Saw and Bandsaw Blades.

Saw any material including metal, wood, plastic, tubing, etc. without chipping or tearing. Blades are of rugged spring tempered steel, hardened for maximum cutting life. SPYRAL Bandsaw Guides & Blades available for Delta 14" Bandsaws and all DO-ALL machines.

Since your FREE blade will be distributed by your industrial supplier, it is imperative that you include his name in coupon.

Tyler SPYRAL HACKSAW BLADE!

MAIL COUPON FOR FREE SAMPLE

TYLER MANUFACTURING CO., INC. Dept. D-10
1005 W. Arbor Vitae Ave., Inglewood 7, Calif.
Please send FREE sample SPYRAL HACKSAW BLADE and full information about all Tyler Products.

Name _____
Company's Name _____
Address _____
City & State _____
My Industrial Supplier is _____

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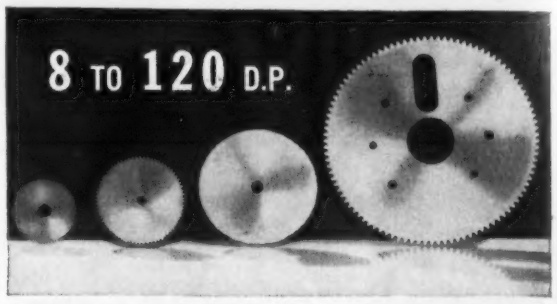

LONG LIST OF STOCK GEAR DIES OFFERS YOU BIG SAVINGS!

ACCURATE STAMPED GEARS by *WINZELER* are BIG savers of time and money. Single stampings are laminated to wide faces at savings up to 60%! Further economies are made possible by a BIG range of *stock* Dies. Modern new plant, methods, and equipment now greatly increase production speed, efficiency and *economy!* Send blue prints. Tell us about your needs today. No obligation.

SEND FOR...

New list of WINZELER-made stock Gear Dies. Ask for it on company letterhead, *please!*

WINZELER *Stamped Gears*

WINZELER MANUFACTURING & TOOL CO.
7355 W. WILSON AVENUE • CHICAGO 31, ILLINOIS

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A NEW and VERSATILE method
FOR FACTORY CLEANING

Tornado Pac-Vac is popular as a bench type vacuum or dust collector. Install it on a bench, hang it on a wall or machine and you have a powerful suction right at the source of dust, lint, dirt or chips.

Tornado offers you the handiest, portable vacuum or air source you've ever used. Pac-Vac is a powerful motor and impeller unit mounted on a comfortable pack frame. Use it as a vacuum cleaner for cleaning floors, bins, shelves, machines, fixtures, overhead pipes, beams or skylights.

By changing the hose position it becomes a handy tool for Air sweeping paper, boxes and debris from large areas.

The demountable motor unit converts into a powerful blower for motor and machinery maintenance.

Buy several Pac-Vacs, keep them throughout your plant and watch "housekeeping" improve at once. Pac-Vac is available with ¾—1 or 1½ H.P. motor units and a wide assortment of attachments.

Write for Pac-Vac Bulletin No. 921 today. Your local Tornado Distributor will be glad to demonstrate Pac-Vac in your plant.

BREUER ELECTRIC MFG. CO.
5116 N. Ravenswood Avenue • Chicago 40, Illinois

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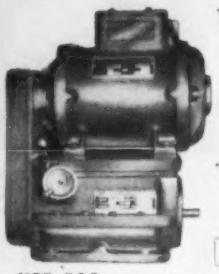
SAVE! WAR SURPLUS Gov't. Cost $650 BRAND NEW!



1½ HP Motor Driven (single or 3-phase)
VARIABLE SPEED
HYDRAULIC
SPEED REDUCER
with
Instantaneous *REVERSING!*

Output Speed Reversible in either direction from 0 to 750 R.P.M.

FULLY GUARANTEED

ONLY $122 fob

#VS 143M with 3-phase, 220-Volt Motor

USE FOR: Lathe heads, reamer drives, conveyors, printing presses, cream separators, garden tractors, midget cars, pumps, blowers, canning machines, test benches, etc.

DRIVEN BY a 1½ HP Ball Bearing Westinghouse motor to obtain variable speed in either direction of rotation. Reversing is independent of speed control and EFFORTLESS! Ideal for CONTINUOUS REVERSING operations! Speed selection made by rotating hand wheel—gives infinite number of speeds thru entire range of unit.

UNIT consists of a 1½ ELECTRIC motor (220 Volt, single or 3-phase) driving a variable displacement hydraulic pump which in turn drives a fixed displacement hydraulic motor. Electric motor drive is positive, thru silent chain and sprocket, enclosed in oil tight guard. Transmission is self contained in sealed 1 qt. capacity aluminum oil reservoir with separate controls for speed variation and reversing. Input and output shafts are ⅝" dia., standard keyway. Weight 32 lbs. Size: 11" long, 7½" wide, 7½" high. Supplied with complete instructions and 2 qts. hydraulic oil.

#VS-141M with 1 phase, 220 Volt Capacitor Motor . . . $143.50 f.o.b.

If there is any doubt to the adaptability to your particular application, we will accept your purchase order with the understanding that the unit *may be returned* for FULL credit of purchase price.

Write, Order, or Phone TAylor 9-1365

ROBERTS ELECTRIC CO., Dept., ND-840
849 W. GRAND AVE. CHICAGO 22, ILL.

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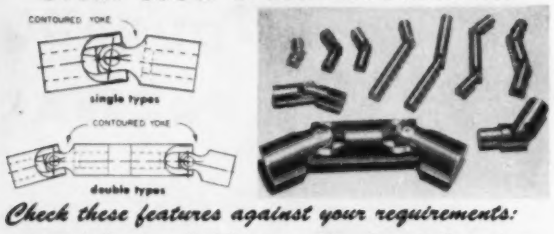
Lovejoy UNIVERSAL JOINTS

INDUSTRY'S MOST COMPLETE LINE FOR EVERY SLOW SPEED APPLICATION



Check these features against your requirements:

Special Contoured Yoke—capable of operating at a maximum angular misalignment of 45° on hand-operated applications.

Static Torque—from 306 to 129,693 in.-lbs. at 12°, depending on size of joint.

Horsepower Ratings—.54 to 207 at 100 rpm.

Tolerances—pins ground to .0005"... forks concentric to within .001"... precision accurate center blocks.

Standard Specifications—hub diameters ½ to 4"... bores ¼ to 2"... lengths (single) 2 to 10⅝", (double) 4 to 21¼". All specifications can be altered or special joints designed to individual requirements.

***GET THIS HANDY GUIDE*... It's the quick and easy way to get the Universal Joint that is just right for your application. Request Bulletin 820.**

LOVEJOY FLEXIBLE COUPLING COMPANY
4803 WEST LAKE STREET • CHICAGO 44, ILLINOIS

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• Centerless Ground to extreme accuracy. Special new-type Equipment, assures concentric chamfered or formed ends—no cut-off burrs.

Dowel—Straight—Countersunk—Angle and Spherical Ends
.020" to .1875" Diam.
.125" to 2" Length

Precise Specifications Accurately met. If requested on order, a surface analysis tape, showing surface in micro-inch measurements, will be furnished. Tape magnifies 39,370 times.

Small orders or volume production to your exact requirements and material specifications.

Quality Precision Work!
Prompt Deliveries!
Prices you will like!
SEND US PRINTS FOR QUOTATION

COMMERCIAL CENTERLESS GRINDING COMPANY
6605 CEDAR AVE., CLEVELAND 3, OHIO
Phone: ENdicott 1-3412

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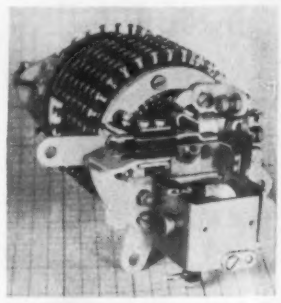
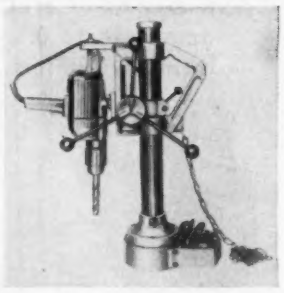
MINIATURE STEPPING SWITCH
operates at up to 80 steps per sec



High speed miniature Uniselector stepping switch is designed for automatic switching and timing control circuits. It will operate at speeds up to 80 steps per second on impulse drive (80 per cent make, 20 per cent break) from a 24, 50, or 110-v dc power supply. Up to 12 banks can be fitted, each having 30 individual contacts mounted in a complete circle. When seven or less banks are required, a sequence switch can be fitted. The sequence switch wiper steps once for each revolution of the main wiper assembly. All wipers can be either bridging or nonbridging. Loosening two screws opens the bank for access to the mechanism for maintenance or adjustment. Made by **Imtra Corp.**, 11 University Rd., Cambridge 38, Mass.

▲ For more details circle NED-503 K8 on enclosed inquiry slip ▲

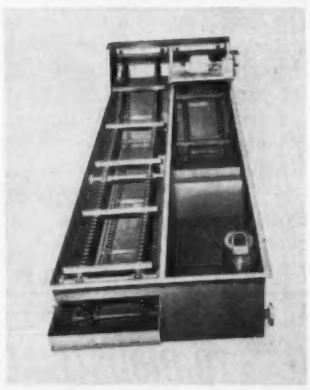
MAGNETIC DRILL PRESSES
accommodate air or electric drills



Precision electric or air drilling in remote or difficult locations is possible with any of three magnetic drill presses. Designed to accommodate standard portable electric or air drills having dead-handle sockets, these units securely grip any ferrous surface. Swivel column and lock permit accurate location of hole after the press is clamped in place. The three models have capacities of ¾, 1¼, and 1¼ in. electric drills and 1, 1¾, and 2-in. air drills, respectively. Made by **Thor Power Tool Co.**, Dept. EB, Prudential Plaza, Chicago 1, Ill.

▲ For more details circle NED-504 K8 on enclosed inquiry slip ▲

COOLANT CLARIFIER
removes metal chips and abrasives



Controlled flow velocity which assures minimum turbulence and maximum time for gravity action are used in this Gravity Clarification unit to remove sludge, metal chips, and abrasive particles from cutting and grinding oils and water-base coolants. No filter medium is used, and retention time for sludge settling is 7 to 9 minutes. Flow capacities range from 20 to 1000 gpm, and tank capacities are 140 to 7600 gal. Made by **Indiana Commercial Filters Corp.**, Delpark Div., Dept. C-203, Lebanon, Ind.

▲ For more details circle NED-505 K8 on enclosed inquiry slip ▲

ELECTRIC DRIVER-DRILL
is two-way portable power tool

Combining the features of a high-torque positive-drive screwdriver and a ⅜-in. capacity drill in a single portable electric tool, this Driver-Drill is available with illustrated pistol grip or a saw grip. Both have reversible side handles. Changeover from screwdriving to drilling is effected by inserting a geared key drill chuck having a special ¼-in. shank in the tool's quick-change chuck. The 2-amp motor delivers controlled 275-rpm speed, and sensitive feed assures accuracy. Foolproof reversing switch permits screw removal. Tool's hex socket accepts all ¼-in. shank bits, extensions, and adapters. Price is $39.95, and drill chuck is $6.95. Made by **Millers Falls Co.**, Dept. NED, Greenfield, Mass.

▲ For more details circle NED-506 K8 on enclosed inquiry slip ▲

Work-O-Matic* Box and Stand for

UNIT LOAD HANDLING AN
WORK-LEVEL POSITIONIN

Check these 7 Work-O-Matic feature

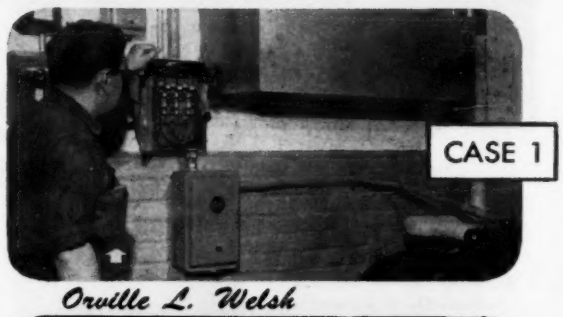
1. **WORK-O-MATIC DROP BOTTOM BOX.** Heavy gauge corrugat steel construction. Square corners.
2. **CORNER STACKING ANGLES.** Safe tiering without shifting. Sav floor space.
3. **HINGED CHUTE BOTTOM.** As forks of truck are lowered, hing bottom opens and parts slide into tray.
4. **WORK POSITIONING STAND.** Receives box from back or sid Safely and easily transported by lift truck.
5. **CONTROL GATE.** Vertical adjustment controls flow of parts into tr
6. **WORK-LEVEL TRAY.** Reservoir feature eliminates work stoppage wh changing boxes.
7. **INCLINED TRAY END.** Assures parts accessibility. Speeds job chang

In addition, Union Metal offers industry's broadest line of convention type material handling containers. Write for complete catalog informatic Address The Union Metal Manufacturing Company, Canton 5, Oh

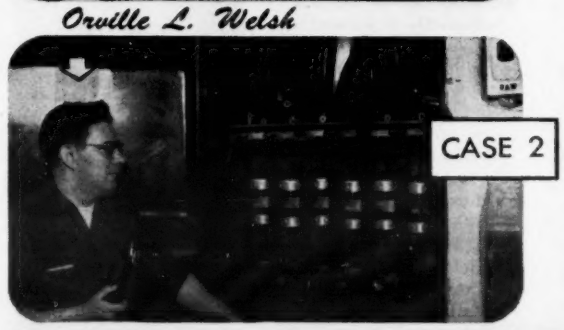
UNION METAL
Material Handling Equipment

▲ For more details circle NED-507

"Experience proved to us, money and provide safer prot



Orville L. Welsh



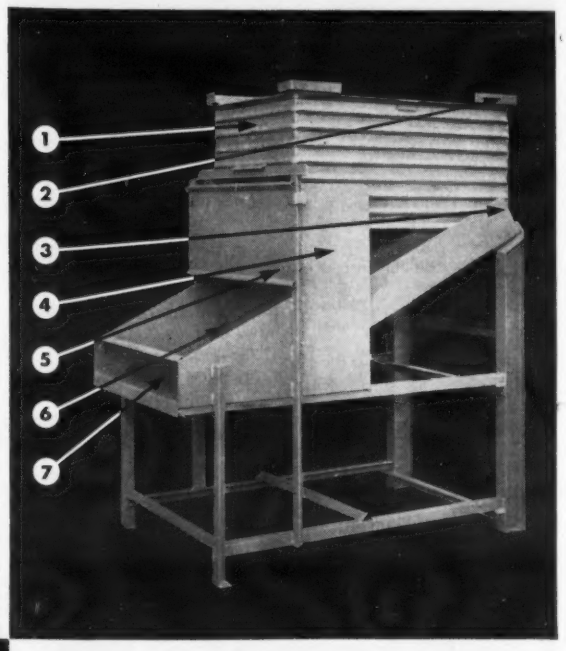
Play Safe! Install FUSETRON Fuses and BUSS Hi-C

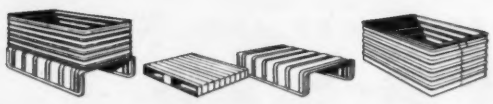
▲ For more details circle NED-508

T

is only a

▲ For more details circle NED-509





*Patent No. 2,445,038

K8 on enclosed inquiry slip ▲

Fusetron Fuses could save us ection . . . *Orville L. Welsh*

Asst. Chief Engineer
Continental Baking Co. Toledo Ohio

"A refrigeration compressor ours was frequently being itdown because the 60 amp. tection we used just could hold the starting currents.

After reading over Fuse- n dual-element fuse litera- sent to us by our com- y headquarters, we tried m out with great success. the past twelve months, have not had to go near switch or open its cover.

In another case, Fusetron s saved us a considerable ount of money. We in- led 600 ampere Fusetron s in parallel in our 1200 ere entrance switch, er than using the more ensive mechanical type protective device.

Personally, I am confi- t we now have better pro- ion than we could have with other types of pro- ive devices."

Why Risk Losses! One needless shutdown . . . one lost motor . . . one destroyed switch or panel . . . one burned out solenoid . . . may cost you far more than replacing all other types of protective devices throughout the entire installation with Fusetron dual-element fuses.

For Loads above 600 and up to 5,000 amps . . . Use BUSS Hi-Cap Fuses

They can be coordinated with Fusetron fuses on feeder and branch circuits to limit fault outages to circuit of origin.

For more information write for —
Bulletin FIS on Fusetron fuses.
Bulletin HCS on Hi-Cap Fuses

Bussmann Mfg. Division
McGraw-Edison Co.
University at Jefferson, St. Louis 7, Mo.

1058

FUSETRON
TRUSTWORTHY NAMES IN ELECTRICAL PROTECTION
BUSS

p Fuses throughout entire Electrical System!

K8 on enclosed inquiry slip ▲

he complete line of

SKF *bearings*

stone's throw away

Your nearby SKF distributor stocks the ball and roller bearings you need. This means he can fill your orders promptly and completely. Furthermore, his factory training enables him to help keep your bearings running smoothly, longer. Why not take advantage of his expert service? Call him today.

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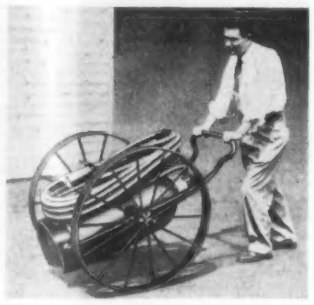
SKF®
EVERY TYPE—EVERY USE

Spherical, Cylindrical, Ball, and "Timken" Tapered Roller Bearings
"Reg. U. S. Pat. Off.

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.

8 on enclosed inquiry slip ▲

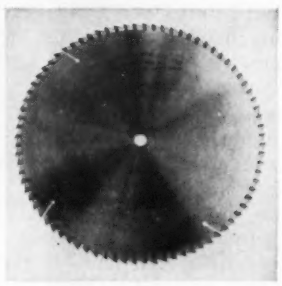
MOBILE FIRE EXTINGUISHER
200-lb dry chemical type on wheels



Universal nozzle of this wheeled fire extinguisher discharges a dense 40-ft dry chemical stream at a total discharge rate of 35 sec. It operates immediately upon removal of safety pin, swing of valve toggle, and a flip of the on-off nozzle lever. Mounted in a large two-wheel carrier, extinguisher contains 200 lb of fire-smothering dry chemical, for fighting flammable liquid, liquefied petroleum gas, and electrical fires. Bridgeman seal head assembly is sealed by hand tightening. Available with either 50 or 100 ft of hose, unit features a dust and moistureproof pressure gage recessed in the head which tells at a glance whether or not extinguisher is ready for action. It operates in a temperature range from −40 to 120° F and is UL-approved. Made by **Walter Kidde & Co.**, Dept. A, 675 Main St., Belleville 9, N. J.

▲ For more details circle NED-510 K8 on enclosed inquiry slip ▲

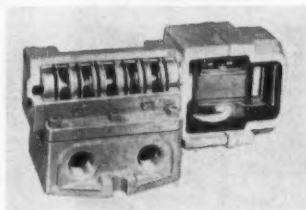
SAW BLADES
for cutting various plastics



Carbide insert tooth principle is used in making Plasti-Kerf saw blades for cutting plastic materials. The extremely narrow gage inserted teeth permit the use of thin blades to eliminate waste. Blades have high rim rigidity for smooth, vibrationless cutting. The teeth can be honed to razor sharpness. The blades also cut very straight edges and do not make burrs and chips on inside diameters of tabular or hollow shaped plastics. Made by **Forrest Mfg. Co.**, 162 Highway 17, Rutherford, N. J.

▲ For more details circle NED-511 K8 on enclosed inquiry slip ▲

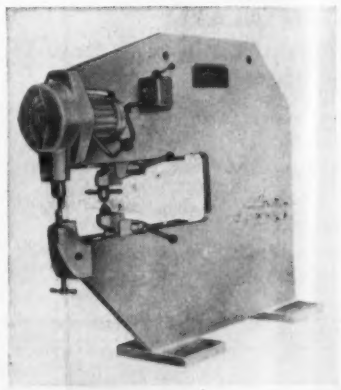
AIR CONTROL VALVES
in solenoid or pilot operated types



Controlled expansion seal featured by line of four-way air control valves assures positive sealing in all operating ranges from 28 in. vacuum to 150 psi. Valves have a balanced, direct-operated spool which allows the use of small, low amperage solenoids for direct operating force. Complete reversal of valve position takes place in less than one electrical cycle. Single and double solenoid-operated models and single or double pilot-operated master valves are available in 1/4, 3/8, 1/2, and 3/4 in. pipe sizes. Quickly replaced valve seats provide "floating" alignment of all parts. Made by **Air Valves Co.**, 22731 Hoover Rd., Warren, Mich.

▲ For more details circle NED-512 K8 on enclosed inquiry slip ▲

SHEARING-FORMING MACHINE
for up to 13-gage sheet metal



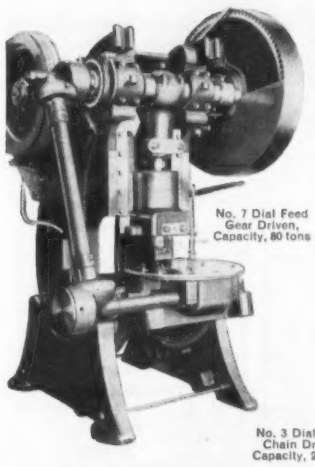
Straight, circular, inside, irregular, slot, and louver cutting as well as beading, joggling, flanging, edge bending, and dishing operations are performed on sheet metal ranging up to 13-gage with this light-duty Pullmax Model P-1 shearing and forming machine. It employs a stationary lower tool and a reciprocating upper tool to facilitate all types of sheet metal operations. Various tools and accessories are available for production or odd-job work. Made by **American Pullmax Co.**, 2457 N. Sheffield Ave., Chicago 14, Ill.

▲ For more details circle NED-513 K8 on enclosed inquiry slip ▲

Modern FEDERAL Dial Feeds give you

automation at less cost!

— eliminate specialized, more costly equipment!



No. 7 Dial Feed Gear Driven, Capacity, 80 tons

No. 3 Dial Feed Chain Driven, Capacity, 26 tons

Federal Dial Feeds are your answer to greater production at lower costs. Equipped with special jigging, automatic feeds and ejectors, their applications are virtually unlimited and the need for specialized, more costly equipment is often eliminated. (One manufacturer increased production 600%.)

Add Federal's quality features and workmanship...and you've got a winner. Gear or chain driven with cam-type indexing mechanisms. Sizes 6 to 80 tons.

FEDERAL PRESS COMPANY
806 Division St., Elkhart, Indiana

FEDERAL DIAL FEED PRESSES
33 Years' Experience in Dial Feed Engineering and Construction

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A FREE COST-CUTTING CONSULTANT

Your local Industrial Distributor has gained wide experience in serving many industries and in providing solutions to a wide variety of production problems. His service begins with an idea — a cost-cutting idea in the form of a product or method which he is willing to suggest at no charge to you.

INDUSTRIAL DISTRIBUTORS — SERVING INDUSTRY ECONOMICALLY — THE RIGHT HAND OF PRODUCTION

A COST-CUTTING TOOL

He frequently recommends Anderson wire brushes for those jobs requiring production efficiency with top quality results.

For lowest cost per unit processed select: Anderson.

Write for complete catalog of wire brushes with detailed selection and operation data.

Anderson CORPORATION

1048 Southbridge St., Worcester 10, Mass.

▲ For more details circle NED-515 K8 on enclosed inquiry slip ▲

A CONVERTIBLE PIPE CUTTER

REED

● Quick, easy change-over transforms Roller Cutter into a 4-wheel cutter for ditch and other close-area work. These new Reed cutters—whether in Roller, 3-wheel or 4-wheel models — are the world's easiest, cleanest cutting tools in their size ranges. Roller model has cutting wheel in block where it remains for full sight lining up with cut-off mark. Operating with easy, ratchet-like action through one-fourth of a revolution, Reed 4-wheel model is best for close quarters work. In three capacities for pipe sizes from 1/8" to 3". Razor Blade wheels by Reed leave minimum burr, cut easier.

ASK YOUR SUPPLIER OR WRITE FOR FREE LITERATURE.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA, U. S. A.

▲ For more details circle NED-516 K8 on enclosed inquiry slip ▲

A New "TINY" SOLENOID VALVE
Type TT

A small, single seated, angle type valve featuring direct lift operation. Packless valve body machined from brass bar stock with stainless steel plunger and point assembly. Well suited to applications where a wide range of pressures with relatively little flow makes pilot-operated valves impracticable.

⅛" & ¼" pipe sizes

For air, gases, water, oil, steam and other media not harmful to bronze

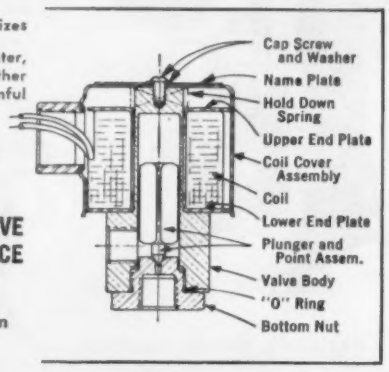
Pressures from 0 to 400 psi

• •

A RUGGED VALVE AT A LOW PRICE

• •

Send for Bulletin TT-220



ATKOMATIC VALVE CO., INC.
545 West Abbott Street, Indianapolis, Indiana

▲ For more details circle NED-517 K8 on enclosed inquiry slip ▲

PROVEN
by the acid test
SURETY
SURESEAL GLOVES

Wherever chemicals, solvents, oils and other corrosive materials are handled—they can be handled better, faster and safer with SURETY Sureseal Gloves. Proper health safeguards increase employee morale and maintain worker confidence at a high level. Tangible results are also achieved in higher production and lower operating costs.

Proven under the most rugged conditions, Sureseal (made from Hycar) affords maximum protection against crippling injuries and disfiguring skin diseases, providing the greatest positive resistance to the largest number of acids and other caustic liquids. Sureseal wears up to 14 times longer than rubber and other synthetics and they are four to eight times more snag, abrasion and puncture-proof. The exclusive Turn-Cuff design provides additional protection by keeping liquids away from arms and inside of gloves.

Test a pair of Sureseals in your own shop—and at our expense! To get your free test gloves simply fill in the coupon and mail. Dept. N

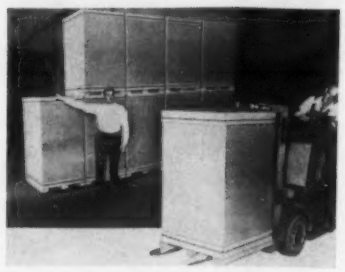
THE SURETY RUBBER CO., Carrollton, Ohio

Gentlemen:
We're interested in testing Sureseal gloves. Send sample and information to:

Name_____
Company_____
Address_____
City_____ State_____
Glove Jobber_____
Glove Use_____

▲ For more details circle NED-518 K8 on enclosed inquiry slip ▲

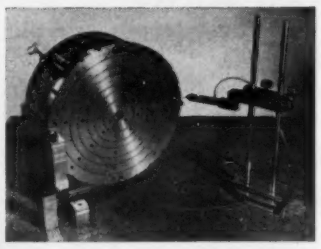
BULK SHIPPING CONTAINERS
square units can be stacked



Up to 1 ton of dry, free-flowing materials can be shipped in Pillar-Pac corrugated bulk shipping containers, made square to save shipping and storage space. Self-palletized construction facilitates handling by fork lift trucks. They can be stacked two-high, have a body bursting strength of up to 500 psi, and are approved for rail shipment. Set-up and filling are fast and easy. Sides can be imprinted with advertising and product identification. After use, the non-returnable containers can be used as waste bins, reused, or converted into smaller containers. Variety of emptying equipment is available or can be economically constructed. Made by **Ohio Boxboard Co.**, Container Dept., Rittman, Ohio.

▲ For more details circle NED-519 K8 on enclosed inquiry slip ▲

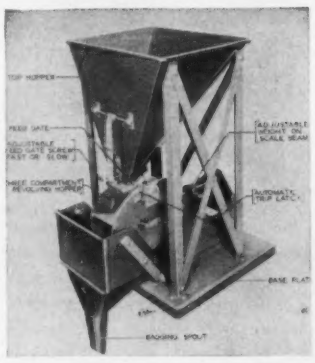
DRILLING & CHECKING FIXTURE
motor and hand-operated units



Designed as a checking fixture, the M-M Check can be used as a grinding fixture for making any combination of slots, squares, hexagons, or other shapes. As an accessory for jig grinders and borers, it is a time-saving device on short-run production. Its 24 equally-spaced slots permit boring or drilling 1, 2, 3, 4, 6, 8, 12, or 24 equally spaced holes to the circle. Motor driven and hand operated units are available. Tooling bolts permit checking any angles. Fixture has a $10\frac{5}{8}$-in. diameter and $4\frac{3}{4}$-in. height. Models holding bolt circle to 0.002 and 0.0003-in. tolerances are offered. Made by **M & M Tool & Mfg. Co.**, Dept. 3, 1124 E. Third St., Dayton 2, Ohio.

▲ For more details circle NED-520 K8 on enclosed inquiry slip ▲

WEIGHING-FILLING MACHINE
delivers 18-20 weighings per minute



Operating automatically by gravity flow, the Holm Model GF bench model weighing and filling machine requires no motor in handling free-flowing materials. From 18 to 20 accurate weighings per minute of up to 5-lb each are delivered continuously to small containers placed under the discharge spout. Material is placed in the top hopper or fed into it by spout from a separate bin. Top hopper capacity is 20 to 50 lb, depending upon the material, and dimensions are 20 x 16 x 36 in. No wiring is required. Made by **Richardson Scale Co.**, Van Houten Avenue, Clifton, N. J.

▲ For more details circle NED-521 K8 on enclosed inquiry slip ▲

LUBRICANT SYSTEM ALARM
warns of interruption in lube flow

Installed at each terminal point of lubrication, then connected to desired warning device, the Lube-Line Alert will signal any interruption of the lubricant flow. Device is usable with any viscosity oil or synthetic lubricant, for pressures up to 10,000 psi. Explosionproof types are also available. Device is applied to any central force-feed lubrication system. Made by **Houdaille Industries, Inc.**, Manzel Div., 302 Babcock St., Buffalo 10, N. Y.

▲ For more details circle NED-522 K8 on enclosed inquiry slip ▲

A modern truck for modern plants
The HydroLectric
with most modern features

- 2 Drive Wheels instead of one
- 2 Braking Systems available instead of one
- 4 Wheel Stability instead of three
- Alloy Gear Transmission instead of chains
- 100% more Steering Ease —Greater Maneuverability
- 50% less Maintenance —Easy Accessibility
- Finger-Tip Control —Greater Safety

Platform Model K

Put these modern features to work for you, greater profit at no additional cost.

Write for Bulletin KW

STUEBING Designed • Engineered • Built

LIFT TRUCKS, INC. 2423 Spring Grove Ave., Cincinnati 14, Ohio

THERE IS A TRUCK FOR EVERY PURPOSE TO HANDLE ANY KIND OF MATERIAL.

▲ For more details circle NED-523 K8 on enclosed inquiry slip ▲

you'll do better with MAGNETS

For the magnets you need, when and as you need them—call PERMAG. All shapes, sizes and grades in stock. 24-hour delivery. Write for catalog.

PERMAG CORP.
210 TAAFFE PLACE, BROOKLYN 5, N. Y.

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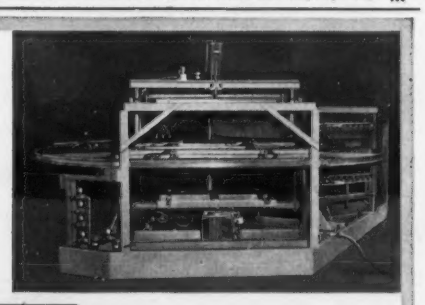
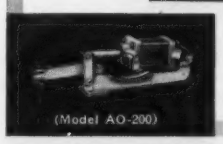
COOL IDEA




(Model AO-200)

FOR REFRIGERATOR MANUFACTURERS

Knu-Vise air-operated clamps are featured on a new 3-station automatic machine developed by the Brown Machine Company, Beaverton, Michigan, for vacuum forming inner door panels and other refrigerator parts at a maximum production rate.

The machine is completely automated with air clamps, mold table, vacuum system and fans, and rotating mechanism all operating from a single switch. 100 panels per hour—as big as 42" x 72"—can be produced.

Quality standards are so high that only dependable Knu-Vise air-operated clamps can be used. Take a tip—investigate Lapeer today!

Manufacturers of over 150 models of manually and air-operated clamps and pliers

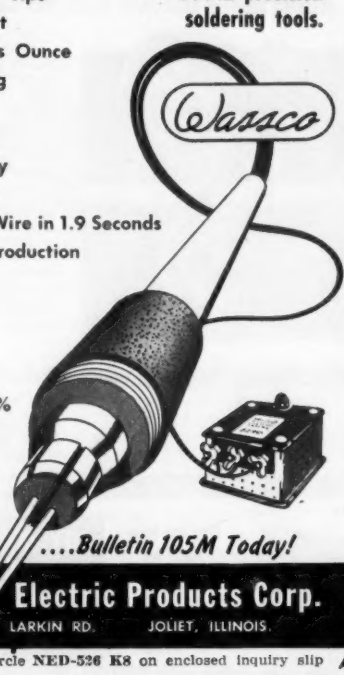
KNU-VISE PRODUCTS LAPEER MANUFACTURING CO.
3062 DAVISON ROAD
LAPEER, MICHIGAN
WESTERN DIV.: PECK and LEWIS CORPORATION 4436 Long Beach Ave., Los Angeles 58, Calif., ADams 3-7146
CANADIAN DIV.: HIGGINSON EQUIP. SALES LTD. 1131 Pettit Road, Burlington, Ontario

▲ For more details circle NED-565 K8 on enclosed inquiry slip ▲

The NEWEST and FINEST...

- Resistance Principle
- Dual Metal Alloy Tips
- No Ground Circuit
- Handpiece Weighs Ounce
- Sound Engineering
- Quality Plus
- Gap Adjustable
- Heats at tips only
- Dramatically Fast
- Soldering No. 20 Wire in 1.9 Seconds
- Strictly a High Production Industrial Tool
- Cold, Porous, Soldered Joints Are Eliminated
- Increases Production 10 to 50%
- Tweezer Effect Without Fatigue
- Three Heats: 15-50-100 Watts

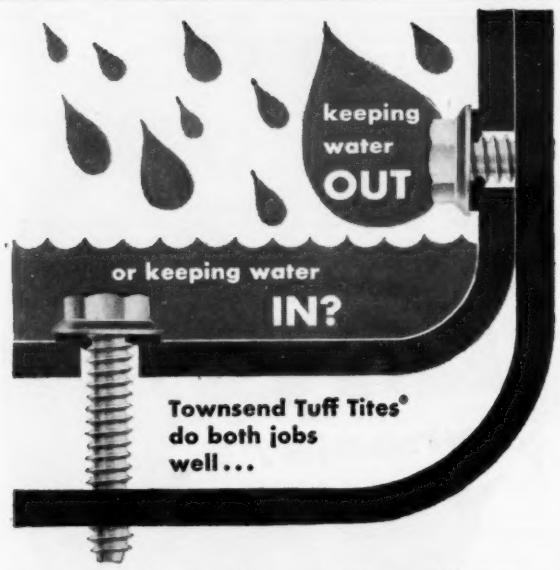
... in precision soldering tools.



Write For.... ....Bulletin 105M Today!

Wassco Electric Products Corp.
204 S. LARKIN RD. JOLIET, ILLINOIS.

For more details circle NED-526 K8 on enclosed inquiry slip



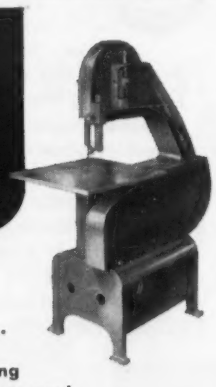
Townsend Tuff Tites® do both jobs well...

One of the outstanding advantages of Townsend Tuff Tite fasteners is that they provide an economical means for leak-proof joining of metal, asbestos, porcelain or plastic. The pre-assembled conical neoprene washers flow into the holes as the fasteners are seated, filling them and making waterproof seals. Other advantages include ease and economy of installation, surface protection and vibration resistance.

If you are joining metal, plastic, porcelain or asbestos, you should know about Townsend Tuff Tites. Your Townsend representative will be glad to discuss them with you, or we will send you complete literature. Townsend Company, P. O. Box 237-G, New Brighton, Pa.

For more details circle NED-527 K8 on enclosed inquiry slip

LOCKFORMER
BETT-MARR
BAND SAW



- 24" throat without 24" bulk ...
- Variable speeds without speed reducer power losses ...
- Heavy-duty, production cutting at half the price you'd expect to pay!

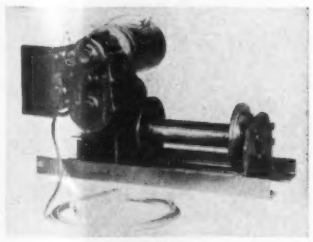
Big enough for almost any sawing job, small enough to fit most anywhere, the Lockformer Band Saw's low cost makes it a practical and profitable investment for *any* shop. Blade speeds of 100, 600 and 3000 fpm give production speed cutting on wood, plastics, forgings, steel plate, non-ferrous metals and stainless steels. Ball bearings with neoprene seals, cemented carbide blade guides, friction-free and slip-proof chain for final drive and many other top-quality features.

WRITE FOR bulletin giving full facts.

THE LOCKFORMER CO.
Dept. N 4615 West Roosevelt Road
Chicago 50, Illinois
In Canada: Brown Boggs Foundry & Machine Co., Ltd., Hamilton, Ontario

For more details circle NED-528 K8 on enclosed inquiry slip

PORTABLE ELECTRIC WINCH
battery powered unit lifts 2500 lb

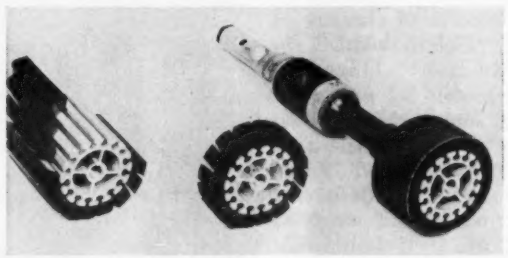


Weighing 60 lb, the My-Te portable winch is powered by any 6 or 12-v battery to handle various lifting and pulling jobs. Lifting capacity is 1250 lb on a single line and 2500 lb on a double line. Pulling capacities are 2500 and 5000 lb, respectively, on single and double lines. Drum speed is 32 rpm, and capacity is 150 ft of 1/4-in. cable. The 27 x 12 x 14-in. unit has a gear ratio of 175:1, sealed gear housings, constant pressure brake when cable is free spooling, and 10-ft remote control cable with forward and reverse action. Price is $237.50. Made by **City Engineering Co.**, 3543 Massachusetts Ave., Indianapolis 18, Ind.

For more details circle NED-529 K8 on enclosed inquiry slip

GRINDING WHEELS
expanding type in widths to 8 in.

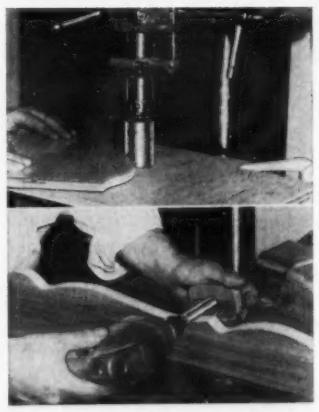
Weighing only 10 oz per lineal inch, the Model 004 Flexcore expanding type grinding wheel has a 4-in. diameter and is offered in any width up to 8 in. Con-



centric core of extruded aluminum assures vibration-free operation. Centrifugal force keeps abrasive band on wheel under all operating conditions, without glue or other bonding material. Band slips off with ease when the wheel is stopped, and damaged flex members are easily replaced. Other Flexcore wheels are offered in diameters of 3, 4, and 5 in. in various widths and types of flexers. Made by **Nu-Matic Grinders Inc.**, Dept. A, 8224 Carnegie Ave., Cleveland 3, Ohio.

For more details circle NED-530 K8 on enclosed inquiry slip

ROTARY FILES
have tungsten carbide abrasive

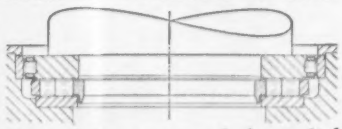


Diameters from 3/16 to 1 1/2 in. are available in Roto-File power operated abrasive drums, for use in 1/4-in. electric hand drills or drill presses. They have a tungsten carbide abrasive (developed by Skil Corp.) of 80 grit, brazed to the steel drum. Files are cleaned with a wire file brush or any suitable solvent. They have double bearings—one end is chucked and the other fits in a bearing block as illustrated for two-hand control when working on wood, plastics, Masonite, and other materials. Made by **R. A. Ness & Co.**, Dept. NED, 5083 Elston Ave., Chicago 30, Ill.

For more details circle NED-531 K8 on enclosed inquiry slip

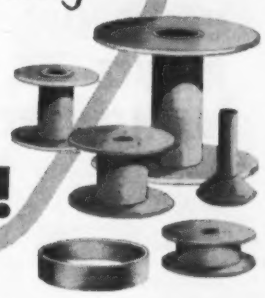
THRUST & RADIAL BEARING
operates at temperatures to 300° F

Usable wherever both radial and thrust loads must be carried in a restricted space, dual-duty cylindrical roller bearings are suited for continuous or intermittent operation with bronze or Rollube retainers. It consists of radial and thrust roller assemblies, with the flanged inner race of the radial section serving as the revolving plate of the thrust section. Typical of this bearing's performance are the ratings of the 6 3/8-in. OD, 3 1/2-in. bore unit —1340 lb radial capacity and 9500-lb thrust capacity at 1750 rpm. Bearing capacity, size, and design can be modified to meet customer's needs. Made by **Rollway Bearing Co.**, Dept. X-2561, 541 Seymour St., Syracuse 4, N. Y.



For more details circle NED-532 K8 on enclosed inquiry slip

There are many uses for SONOCO PAPER SPOOLS!



Sonoco paper spools have been the answer to many a need . . . in production, packaging and shipping . . . for numerous companies in many industries.

For example, they're perfect as self-dispensing carriers for tapes, rope, wire and cord.

Sonoco paper spools can be made to meet your exact requirements, or you can choose from a wide range of standard sizes.

Sonoco also makes all kinds of paper products for industrial use such as cones, tubes, cores and molded shapes.

Ask Sonoco for information, samples and prices!

SONOCO PRODUCTS COMPANY
2763 HARTSVILLE, S. C.
"PLANTS FROM COAST TO COAST"

For more details circle NED-533 K8 on enclosed inquiry slip

WELL STACKED

racks for any industry

complete metal working facilities including...

TUBING—Square, Round, Rectangular and special shapes

WIRE MESH—All Gages

SPECIAL FABRICATIONS

Write for complete catalog!

EQUIPMENT MFG. INC.
21566 HOOVER ROAD DETROIT 5, MICHIGAN

For more details circle NED-534 K8 on enclosed inquiry slip

SILICONES INCREASE VALVE LIFE, REDUCE MAINTENANCE

Dow Corning Valve Seal lubricates and protects metal, rubber and plastic valve parts long after conventional lubricants fail . . . stays greaselike from —40 to 500 F . . . is relatively unaffected by water, steam, many chemicals, corrosive gases and weathering.

Valve Seal eliminates need for stocking a lot of special-purpose valve lubricants . . . meets service requirements for plug valves, control valves, flow meter bearings, pump packing, actuator cylinder packing glands, or plug cocks.

For Free Sample and full information, write dept. 5410.

first in silicones **Dow Corning CORPORATION** MIDLAND MICHIGAN

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NEW!

CLECO 6 SERIES SCREWDRIVERS OFFER UNEQUALED TORQUE CONTROL!

Two new components, plus improved body design, make the Cleco No. 6 Series Pneumatic Screwdrivers the finest tools in their class.

NEW MOTOR: lighter, quieter, more powerful . . . requires less air than ever before.

NEW CLUTCH: eliminates slugging; holds accurate, sustained torque to closer per cent variation than the dimensional tolerances of commercial screws and nuts themselves! Quick, easy, self-locking adjustment cannot drift. Roller principle greatly reduces wear.

A superior tool—in performance, maintenance, economy and service life. Ask a Cleco representative for details or write for new literature.

CLECO AIR TOOLS

Division of REED ROLLER BIT COMPANY
P. O. BOX 2119 • HOUSTON 1, TEXAS

IN CANADA: Cleco Pneumatic Tool Company of Canada, Ltd. 927 Millwood Road, Leaside (Toronto), Ontario

150

▲ For more details circle NED-536 K8 on enclosed inquiry slip ▲

There's an Easier Way!

Break away from old fashioned cutting methods . . . save time, temper and patience. Now . . . zip through 3/16" aluminum, Fiberglas, plastics, plastic laminates, even 16-gauge steel, with minimum effort . . . maximum speed . . . with the KETT Panel Master Saw. Its performance is outstanding on metal laminates such as Mirawal, Metlwal, Met-L-Wood and Amorply. Two-inch diameter saw blades give full ⅜" depth cut. Leaves accurate, smooth milled edge that requires no sanding or finishing. Amazingly easy to use . . . extra rugged for long, hard service.

Powered by heavy duty, industrial type 110 volt AC/DC portable 5/16" capacity electric drill motor. Ball bearing equipped drive for smoother operation.

write for Catalog E-34

KS-3AM Panel Master Saw

THE KETT TOOL COMPANY
5051 Madison Rd.
Cincinnati 27, Ohio

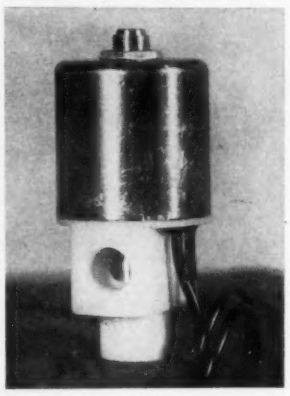
▲ For more details circle NED-537 K8 on enclosed inquiry slip ▲

SHEET METAL FABRICATOR
cuts and forms up to 9/32-in. sheet

Flanging, beading, joggling, planishing, edge bending, slot cutting, and louvering are some of the operations that can be performed by this Tru-Edge Metl-Mastr machine. This sheet metal shear and forming machine can also be used for circle cutting up to 49-in. diameter and for free-hand contour shearing of up to 9/32-in. thick metal sheet. Cam action affords vibrationless shearing. Three models have various cutting capacities. Made by **Lennox Industries, Inc.**, Lennox Tool & Machine Builders Div., Dept. S, Lima, Ohio.

▲ For more details circle NED-538 K8 on enclosed inquiry slip ▲

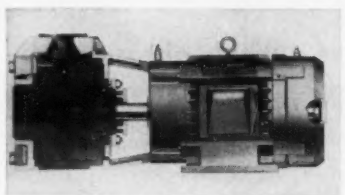
SOLENOID VALVE
for liquids and gases



Encapsulation and impregnation of the coil of this Electro - Valve in epoxy make it fully moistureproof. Solenoid actuated and suited for both liquids and gases, it is offered in a wide range of meter flow adjustments for pressures from 0 to 150 psi. Self-cleaning internal parts are stainless steel. Prototypes are offered for testing at $5.25 each. Made by **Johnson Electronics Inc.**, Dept. E.D., Box 1675, Casselberry, Fla.

▲ For more details circle NED-539 K8 on enclosed inquiry slip ▲

CORROSION RESISTANT PUMPS
made of impervious graphite



Three sizes, two with nearly twice the capacity of present models, have been added to the line of Karbate impervious graphite pumps. They have 1, 1½, and 2-hp motors; operate at heads of 33, 51, and 67 ft, and deliver up to 150 gpm. Optional 3 and 5-hp motors are used on two larger models for handling fluids of higher specific gravity than water. Because they are corrosion resistant, they are especially suited for use in the chemical and metal finishing industries. Made by **National Carbon Co.**, Dept. 1325, 30 E. 42nd St., New York 17, N. Y.

▲ For more details circle NED-540 K8 on enclosed inquiry slip ▲

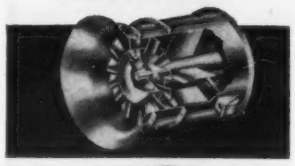
ELECTRIC TRACTORS
feature totally-enclosed gear drive

Gear drive of the redesigned series of electric tractors is a single unit, with motor, transmission, and drive wheel mounted in a balanced vertical column. Gears are totally enclosed, revolving in a constant oil bath. Power is furnished by a high torque motor and a 24-v battery. An adjustable time delay mechanism smoothly accelerates through four speeds forward and reverse. Operator stands on a platform 7 in. above the floor. Dual braking and acceleration controls in the steering handle can be operated with either hand. Standard SX-24 model has speed of 6¼ mph without load, or 3¼ mph with maximum rolling load. Drawbar pull is 550 lb. Tractors now available are stand-up riding, sit-down riding, Radox radio remote controlled, and Guid-O-Matic electronically guided operatorless models. Made by **Barrett-Cravens Co.**, 628 Dundee Rd., Northbrook, Ill.

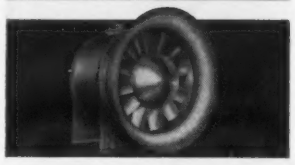
▲ For more details circle NED-541 K8 on enclosed inquiry slip ▲

CHANGE VOLUME OR PRESSURE WITH JOY AXIVANE FANS

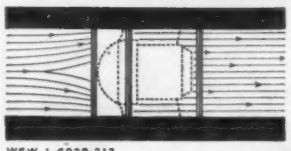
Adjustable blades can be set on the job.



SAVE SPACE
The motor is inside . . . entire fan mounts inside duct work . . . no foundations, offsets, drives, or guards to waste space.



SAVE LABOR
Simple, in-line design means quick, economical installation—even with inexperienced labor. Extremely low maintenance.



SAVE POWER
No belt power loss . . . high efficiency requires less power. Adjustable blades can correct for poor ductwork or unpredictable resistance.

WSW 1 6936-213

Find Out More about Joy High-Performance Fans . . . Get FREE BULLETIN 214-54

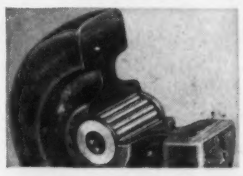
JOY MANUFACTURING COMPANY
Oliver Building, Pittsburgh 22, Pa.
In Canada: Joy Manufacturing Company (Canada) Limited, Galt, Ontario

▲ For more details circle NED-542 K8 on enclosed inquiry slip ▲

Now . . . for the *first time* you can have big, really big wheels in quiet, long-wearing, easy-rolling, floor-protective Texite.

Texite wheels are those tough, high capacity industrial wheels made of heavy macerated or chopped canvas, impregnated with phenolic resin and press formed under high pressure and temperature.

Immediately available, from Albion, in diameters from 3¼" to 16", tread widths from 1½" to 4" and capacities all the way to 8000 pounds. Plain, roller or sealed bearings.



Laminated Tread Texite Wheels
Even more durable than regular Texite, these wheels have continuously-wound tread with macerated centers. Highly resistant to chipping, fraying. Shock or impact resistance is 35% greater and safe loading capacities are increased 25%. Available in same broad range of sizes as regular Texite wheels.

FREE CATALOG—Albion's big, new 44-page catalog of Industrial Casters and Wheels is ready for your use and convenience. Write for your personal copy—Today!

ALBION INDUSTRIES inc.
Albion, Michigan

▲ For more details circle NED-543 K8 on enclosed inquiry slip ▲

TOKHEIM High-Vacuum

HAND PUMPS

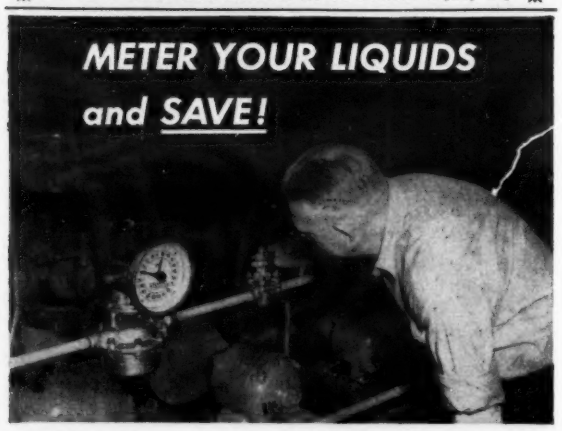
for industrial liquids

Here's an all 'round utility pump that saves much more than its cost in speeding production, improving housekeeping, preventing waste. Eliminates slippery floors and liquid accumulation so often the cause of fire and accidents. Delivers 20 gallons per 100 back and forth strokes. Pumps oil and many other liquids. (Write for approved list.) Has hose or spout outlet. Call your dealer, your Tokheim representative, or write factory.

General Products Division
TOKHEIM CORPORATION
DESIGNERS AND BUILDERS OF SUPERIOR EQUIPMENT SINCE 1901
1656 Wabash Ave. Fort Wayne 1, Ind.

Subsidiaries: Tokheim N.V., Leiden, Holland — GenPro, Inc., Shelbyville, Ind.
Factory Branch: 475 Ninth Street, San Francisco 3, California
In Canada: Tokheim-Reeder of Canada, Ltd., 205 Yonge St., Toronto, Ont.

▲ For more details circle **NED-544 K8** on enclosed inquiry slip ▲



CONTROL COSTS—CONTROL QUALITY

Wherever liquids are stored, mixed or consumed, you will be ahead to measure with Rockwell industrial meters. Then you'll control your costs, control your processes, control your end product quality.

There's a Rockwell meter to measure most any liquid—oils, chemicals, paints, liquors, solvents, etc.—even corrosive fluids. Write for bulletin OG-400. Rockwell Mfg. Co., Pittsburgh 8, Pa.

INDUSTRIAL METERS
another fine product by
ROCKWELL

Rockwell ER Meter with large reset register

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More per hour with MEAD

WORK FEEDERS

Feed work fast to drill, tap, broach, mill. Delivers, holds, ejects stampings, castings, screw machine parts up to 3"—thousands per hour. Combines with MEAD Timers and Drill Press Feeds for easy, cost-saving automation.

Send for new Air Power catalog today!
(See Thomas' Register for nearest distributor's address, phone number.)

THE MEAD MAN CAN HELP YOU CUT COSTS Now!

MEAD
SPECIALTIES COMPANY
4114 N. Knox Ave., Dept. NA108, Chicago 41, Ill.

PATHFINDER IN AIR POWER AUTOMATION

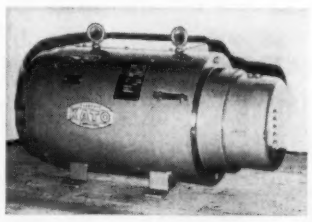
▲ For more details circle **NED-546 K8** on enclosed inquiry slip ▲

EXTENSION LADDER
has wood side rails and aluminum rungs

Aluminum rungs which will not conduct electricity, split, rot, or warp are featured by this 1959 Victor extension ladder. Wood side rails are treated with wood preservative, assuring durability and tight-fitting rungs. Weight is less than 2 lb per lineal foot. Ladder is offered in western and eastern styles in lengths from 16 to 40 ft. Safe-Hi shoes are optional on legs to prevent ladder from slipping. Made by **Howard B. Rich, Inc.**, Ind. Div., Carrollton, Ky.

▲ For more details circle **NED-547 K8** on enclosed inquiry slip ▲

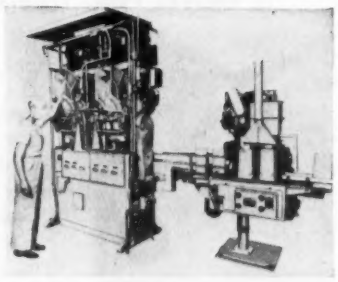
400-CYCLE GENERATORS
1 to 150 kw, two-bearing sizes



Economical, compact source of 400-cycle testing current is provided by this line of 1 to 150-kw, 60-cycle, induction motor driven, 400-cycle frequency changers. The single shaft, two-bearing units have sleeve type exciter armatures which fit over an extension of the main alternator shaft. A combination motor and generator control cubicle is standard, but free-standing floor cubicles and motor-generator mounted panels can be supplied. The panel includes motor starter, automatic output voltage regulator, ammeter, voltmeter, frequency meter, manual regulator adjustor, exciter field rheostat, and selector switch. Illustrated unit has a 6.25 kva, 5 kw, 120/208 v, three-phase, 400 cycle alternator driven by a 10 hp, 220/440 v, three-phase, 60 cycle, 1714-rpm squirrel-cage induction motor. Made by **Kato Engineering Co.**, 1464 First Ave., Mankato, Minn.

▲ For more details circle **NED-548 K8** on enclosed inquiry slip ▲

PACKAGING MACHINE & SCALE
packs forty 5-lb bags per min



Only one attendant is required for this automatic packaging machine and scale duo which feeds and fills flour, cereal, or other free-flowing products at rate of forty 5-lb bags per min. Weight tolerance is to ±0.2 oz. Machine handles 2, 5, and 10-lb bags and provides automatic filling and instant weighing at a constant speed. Fill accuracy is assured by vibrating feeder operating in combination with balanced beam system. Bag-supply feed handles bags with tube width of 6 to 10½ in. The F & F weighing machine and the Trim-Weigh scale can be used independent of each other, if desired. Made by **Bemis Bro. Bag Co.**, Box 86, St. Louis 2, Mo.

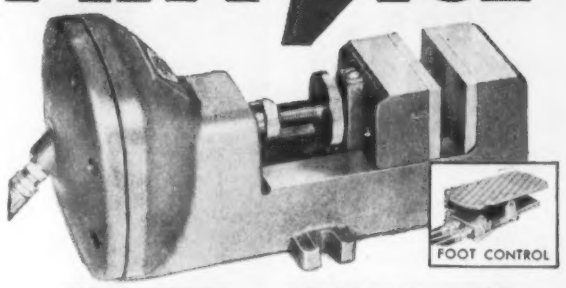
▲ For more details circle **NED-549 K8** on enclosed inquiry slip ▲

ICE CUBE MAKER
delivers up to 110 lb per day

Suited for industrial plant cafeterias, laboratories, or other locations requiring up to 110 lb of ice cubes per day, this slant-front Model CMZ011 ice cube maker is fully automatic. It can be supplied with cutting grids to make 1½ x 1¼-in. cubes or ¾ x ¾-in. cubelets in a variety of thicknesses. Storage bin holds up to 70 lb of cubes. Machine operates on 115-v 60-cycle ac. Made by **General Motors Corp.**, Frigidaire Div., 1509 Amelia St., Dayton 1, Ohio.

▲ For more details circle **NED-550 K8** on enclosed inquiry slip ▲

Speedy
AIR VISE



HIGH SPEED • POWERFUL GRIP

New, improved model speeds up all repeat operations—*milling, drilling, tapping, punching, bending, riveting.* Both hands left free to produce more! Light squeeze to 2250 pounds pressure! Extra thick jaws for attaching jigs. Jaws open to 3-inches; 1/16" to 5/8" maximum travel. Complete with foot control, air hose and fittings..... **$44.00**

SPEEDY 1-TON AIR PRESS
Does the work of expensive presses! Power factor 15 times air line pressure. 5-inch throat; Ram 0 to 5" stroke ⅝"; table 5" x 5". Operated by foot or fingertip controls. **$85.00**

Order from Your Supplier or Write for Air Tool Catalog
W. R. BROWN CORP., 2647 N. Normandy Ave., Chicago 35

AIR TOOLS • AIR VISES • AIR REGULATORS • FILTERS • COMPRESSORS

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CUT HANDLING COSTS
with **HYTROL** Conveyors

All-purpose Model "A" with aluminum bed, reversible, adjustable tension. 8 sizes, 6 to 20' length.

* **RUGGED**
* **COMPACT**
* **VERSATILE**
* **JOB-ENGINEERED**

- Horizontal and Inclined Models
- All-aluminum and All-steel Models
- Portable and Folding Models, Built-in Models
- Table-Top Models for Assembly Operations
- Powered, Reversible, Hydraulic Elevating
- Complete Optional Equipment and Attachments

Let us help you choose the conveyor or conveying system that fits your needs. Engineering assistance at no obligation. Write for catalog.

HYTROL Conveyor Co.
1965 S. 54th STREET • MILWAUKEE 14, WIS.

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N-631-QD

MOVE BULK MATERIALS...

CEMENT, SAND, IRON OXIDE, WHEAT, CORN, SALT, LIMESTONE (PULV.), CASTOR BEANS, KNOTS, BLOCKS, PAPER, WOOL, COTTON, OATS, RAGS, RUBBER, VEGETABLES (PULV. DRY), COAL (POWDERED), SHAVINGS, CORK (GROUND), SAWDUST (DRY)

Patent No. 2,722,372. Other Patents Pending.

QUICKLY AND ECONOMICALLY WITH NEW HIGH-PRESSURE QUICKDRAFT UNITS

IMPORTANT NOTICE
For withstanding corrosive gases all Quickdraft units are available in standard acid resisting vitreous enamel, No. 316 Stainless Steel, rigid plastics (PVC), and with plastic and Fiberglas coatings.

Typical Example: Eight-inch high-pressure material handling unit exhausting into storage room with negative static pressure readings taken 7 diameters back of Quickdraft — 17.6" WG, velocity 11,676 FPM pulling 135 ft. . . . 18.6" WG, velocity 9,306 FPM pulling 270 ft. . . . 19.3" WG, velocity 6,074 FPM pulling 400 ft.

Quickdraft eliminates downtime for cleaning and replacing fans, motors and bearings . . . there are no moving parts in exhaust line! Quickdraft is also ideal for exhausting paint spray, abrasives, corrosive gases, noxious fumes and high temperatures. Models range from 6 to 30-inches in diameter. For engineering data on materials handling, industrial exhausting and heating-plant venting . . . *write today!*

Quickdraft CORPORATION
P.O. Box 87-L
Canton 1, Ohio

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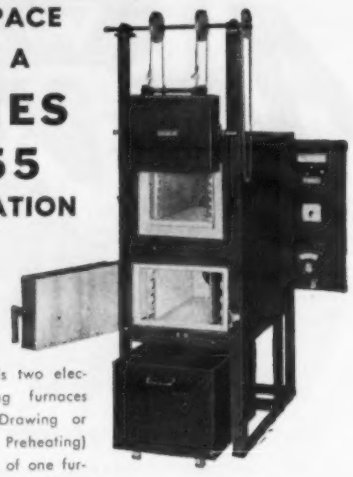
SAVE SPACE WITH A SERIES 8055 COMBINATION



The Series 8055 is two electric heat treating furnaces (Hardening and Drawing or Hardening and Preheating) in the floor space of one furnace. The 8055 is made in nine standard sizes or to your specifications. Furnaces operate on standard line voltage . . . no transformer necessary . . . all controls included. Each furnace is independently controlled permitting two operations to be performed at the same time. Write, wire or call . . .

LUCIFER FURNACES, INC.

Neshaminy 15, Penna. • Diamond 3-0411

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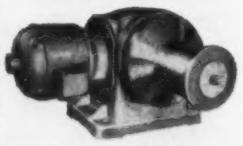
SPOT BOX CARS, QUICKLY and EASILY with ONE MAN and a . . .

STEPHEN S-ADAMSON CAR PULLER

- Save time, labor and money . . . one man can quickly and easily spot up to 6 fully loaded box cars at a speed of 45 feet per minute.
- S-A Car Pullers are self-contained units that require no additional housings.
- Available with Vertical Capstans that pull from any direction or Horizontal Capstans that pull from two directions. A type and size to meet your exact requirements . . . units available that will move up to 12 loaded box cars at one time.
- Ideal for any installation, large or small, for the economical moving of box cars, and docking of barges. Ruggedly constructed to provide years of trouble-free service.

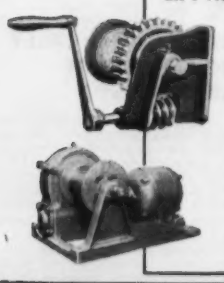
VERTICAL CAPSTAN



HORIZONTAL CAPSTAN

WRITE TODAY . . . REQUEST CATALOG NO. 753

LIFT HEAVY LOADS QUICKLY & EASILY WITH . . .



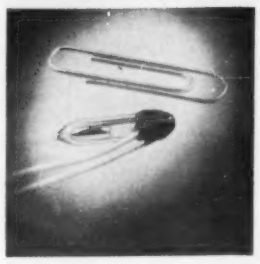
S-A WINCHES

The S-A line of Hand and Motor Winches will provide dependable, trouble-free lifting power wherever and whenever you need it. There's a type and size to meet your specific requirements. S-A Winches are STOCKED for immediate delivery. Write today for complete information . . . request Catalog No. 853.

STANDARD PRODUCTS DIVISION
STEPHEN S-ADAMSON MFG. CO.
12 Ridgeway Ave. Aurora, Illinois

▲ For more details circle NED-556 K8 on enclosed inquiry slip ▲

MINIATURE MERCURY SWITCH weighs only 1.8 grams with leads



Only 0.900 in. long with a 0.174-in. diameter, Type AS419A1 mercury switch is usable in instruments, computers, scales, and electronic equipment. It weighs 1.8 grams with leads attached and may be actuated by slow, snap, or fast tilting action. Mounting can be in any horizontal position. It is attached to the moving part with a mounting clip. Resistive load is 1 amp and inductive load is 0.75 amp on 30 v ac or dc at 5 deg differential angle. At 10 deg, resistive load is 0.5 amp on 110 v ac and 0.75 amp on 110 v dc. Contact arrangement is single-pole single-throw. Mounting position determines whether the circuit is to be normally open or normally closed. Made by **Minneapolis-Honeywell Regulator Co.**, Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle NED-557 K8 on enclosed inquiry slip ▲

ELECTRIC LUBRICATION SYSTEM for machines is fully automatic

Oil or grease is efficiently supplied to banks of injectors in a centralized lubrication system by this compact, automatic, electrically operated Electro-Luber. It is especially suited for service on individual machines or where air is unavailable. Safety shutoff operates if pump runs dry or supply line breaks, and various warning signals can be employed. Occupying less than ½ sq ft of space and weighing only 65 lb, units are available with two pumps, rated 1000 and 2900 psi. Power is provided by a ½-hp motor. Made by **Lincoln Engineering Co.**, 5782 Natural Bridge Ave., St. Louis 20, Mo.

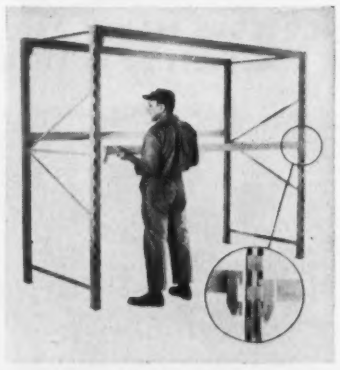
▲ For more details circle NED-558 K8 on enclosed inquiry slip ▲

HYDRAULIC POWERED WHEEL is swivel type free-steering unit

Applicable to portable floor cranes, fork lifts, four-wheel trucks, or any other mobile equipment where forward and reverse power drive is desired at speeds of 1 to 2 mph, this Hydro-Power Wheel is a swivel-jointed, free-steering unit. It derives its power from a 12-v industrial battery, electric motor, and hydraulic pump. The 8½ x 4 x 4-in. tired wheel is driven by a self-contained hydraulic motor. Full control is through the handle. Made by **Stratton Equipment Co.**, Dept. AA, 2030 E. 105th St., Cleveland 6, Ohio.

▲ For more details circle NED-559 K8 on enclosed inquiry slip ▲

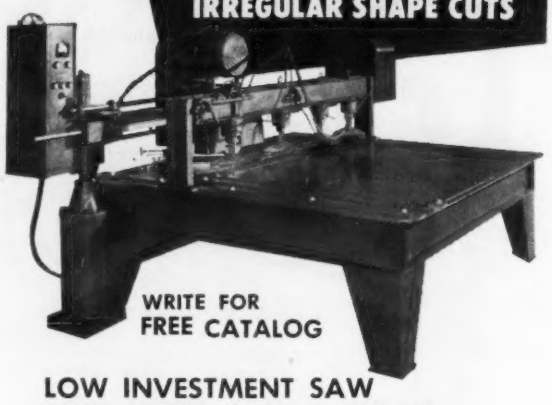
STORAGE RACK for pallets, skids, barrels, etc.



Welded upright frames and unit stringers are only parts required to assemble the Fico storage rack for the storage of pallets, skids, barrels, and many other products. The photo shows that the attachment lock is a part of the stringer which cannot be accidentally dislodged, but can be instantly removed. Support post is 2¼ in. wide and can support loads at any height in 4-in. steps. Uprights and stringers are made in any desired dimensions to take advantage of any available space. Rack is swayless and can have any capacity. It can be loaded from front or rear and joined to make double-depth units. Made by **Midland Truck, Wheel & Caster Co.**, Midland Equipment Div., Dept. R100, 485 S. 21st St., Irvington 11, N. J.

▲ For more details circle NED-560 K8 on enclosed inquiry slip ▲

HIGH-SPEED SAW WITH CLAMP TABLE MAKES IRREGULAR SHAPE CUTS



WRITE FOR FREE CATALOG

LOW INVESTMENT SAW CUTS METAL FAST & CLEAN

Whether you're making straight cuts, odd angle cuts or irregular shapes such as turbine impeller blades, you'll find the Ty-Sa-Man 144 BD combination of speed and amazing accuracy will save you money. Table has positive air-driven clamps to hold material in any position. Other Ty-Sa-Man cut-off models from 10" to 58" cuts . . . long-cut saws for 4' to 60' cuts, with or without cross movement, for friction or abrasive sawing.

Ty-Sa-Man MACHINE COMPANY
550 WHITE AVE., KNOXVILLE, TENNESSEE

▲ For more details circle NED-561 K8 on enclosed inquiry slip ▲

THE NEW LOCK IN WASHERS!

self-sealing

NYLOGRIP DUBO LOCKWASHERS

Unique, positive lock and seal action — when nut is tightened, "cold-flow" action of plastic washer results in perfectly tight seal.

No loss of holding power — you can use rugged Dubo Lockwashers time and again.

Impossible to fit wrongly — fit perfectly every time because they are symmetrical with no threaded parts.

PLUS . . . excellent electrical properties . . . exceptional wear resistance . . . good shock absorption . . . resist corrosion, chemicals . . . non-flammable . . . high flexural strength.

Especially useful for electrical insulation, or for control of electrolytic corrosion between dissimilar metals.

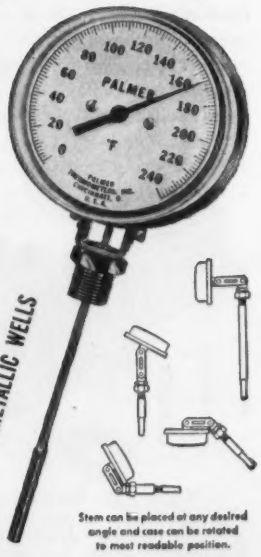
WE'LL SEND YOU COMPLETE FACTS BY RETURN MAIL. JUST WRITE

NYLOGRIP PRODUCTS
447 Watertown Street, Newton, Massachusetts BI 4-0960
NON METALLIC FASTENINGS OF ALL TYPES
Patents applied for.

▲ For more details circle NED-562 K8 on enclosed inquiry slip ▲

Outstanding Accuracy

PALMER DIAL THERMOMETER



Check these functional features

- Direct-drive Bourdon Coil with a filled system for longer lasting accuracy.
- Stem can be placed at any desired angle and case can be rotated to most readable position.
- External calibration for zero setting.
- Unaffected by stem alignment.
- Accurate to one scale division.
- No sticking at any temperature.
- Non-corrosive case.

FITS ALL BI-METALLIC WELLS

Stem can be placed at any desired angle and case can be rotated to most readable position.

Write for Free Bulletin 1035 for complete description and prices.

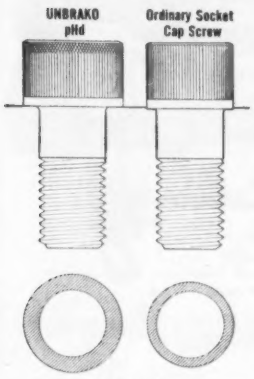
PALMER THERMOMETERS, INC.
Mfrs. of Industrial Laboratory, Recording and Dial Thermometers
2515 Norwood Ave., Cincinnati 12, O.

▲ For more details circle NED-563 K8 on enclosed inquiry slip ▲

New UNBRAKO socket cap screw with pHd*

have as much as 2⅓ times more holding power

*"pHd stands for "proper head design"—a factor in higher product reliability



Though of the same head height, the larger diameter head of the UNBRAKO pHd can carry greater loads without indenting the bolted material. This means greater clamping force and longer fastener life.

Enlarged head diameter increases usable fastener strength as much as 134%, provides as much as 2⅓ times more holding power. This offers the following advantages:

- Miniaturization. Space and weight-saving design through use of smaller diameter or fewer screws. The 170,000-190,000 psi of these fasteners can be used to greater advantage.
- Reduction of fatigue failures. pHd allows consistently higher preloading, a major factor in lengthening the fatigue life of threaded fasteners.
- Fewer loosened threaded fasteners under shock or vibration.
- Elimination of washers under the heads of cap screws in many applications where they are used to increase the effective bearing area.
- Minimization of effects of oversized holes on the head-bearing area and resulting increase in holding power.

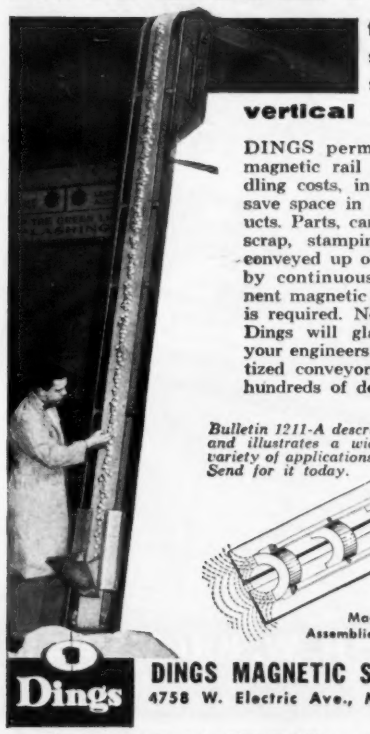
The new UNBRAKO pHd is available through authorized industrial distributors at no increase in price. Sizes ¼ through 1 in. Ask the one nearest you for technical data and specifications. Or write Unbrako Socket Screw Division, STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

sps Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co. • National Machine Products Co. • Nutt-Shel Co. • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle **NED-564 K8** on enclosed inquiry slip ▲

MAGNETIZE!



for space-saving vertical conveying

DINGS permanent, non-electric magnetic rail assemblies cut handling costs, increase capacity, and save space in handling steel products. Parts, cans, bottle caps, nails, scrap, stampings can be quickly conveyed up or down at any angle by continuous, guaranteed-permanent magnetic force. No electricity is required. No failure is possible. Dings will gladly cooperate with your engineers in designing magnetized conveyors that can save you hundreds of dollars.

Bulletin 1211-A describes and illustrates a wide variety of applications. Send for it today.

Dings

DINGS MAGNETIC SEPARATOR CO.
4758 W. Electric Ave., Milwaukee 46, Wisc.
CM-158-1/9

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YOU too, can obtain QUALITY FINISHES

more efficiently...

more economically...

with

CLAIR

SURFACE FINISHING MACHINES

Ten different basic CLAIR models to choose from. Write for information on *any* surface finishing problem you may have.

CLAIR
MANUFACTURING CO., Inc., OLEAN, N.Y.

Offering the Most VERSATILE Line of Surface Finishing Machines

▲ For more details circle **NED-566 K8** on enclosed inquiry slip ▲

PORTABLE DUST COLLECTOR

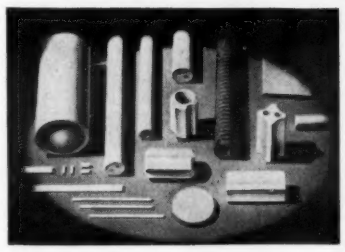
fits any 55-gal open-end drum

Self-contained Dust-Master Model 100 portable dust collector, a cyclone separator type unit, fits any 55-gal open-end steel drum for wet or dry pick-up. Dust and chip laden air is drawn into the drum through a double 90-degree inlet. Heavy dust precipitates to the bottom and out of the air stream by centrifugal action, while fine dust particles are discharged into an after-filter bag or piped outside the building. The sparkproof cast aluminum unit can also be used for transferring liquids. It has a nonoverloading 1-hp suction blower and 5 ft of 4-in. diameter hose. Price without drum is $195. Four-wheel dolly is optional. Made by **Cincinnati Fan & Ventilator Co.**, Dept., ND, 3548 Montgomery Rd., Cincinnati 7, Ohio.

▲ For more details circle **NED-567 K8** on enclosed inquiry slip ▲

CRUSHABLE CERAMIC PARTS

made in various sizes and shapes

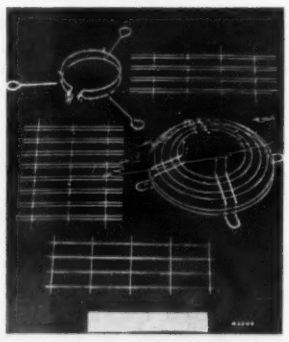


Production facilities for crushable ceramics have been increased to supply practically any custom need for electrical, processing, or structural uses. Though crushable ceramic components are generally made in tubular forms in lengths to 3 in. other cross sections and longer lengths can be provided. Practically any desired dimensional tolerances can be held on custom parts made of a number of materials including magnesia, alumina, and zirconia. High purity types are available for nuclear applications. Made by **American Lava Corp.**, Dept. TG, Cherokee Boulevard & Manufacturers Road, Chattanooga 5, Tenn.

▲ For more details circle **NED-568 K8** on enclosed inquiry slip ▲

COLORED WIRE PRODUCTS

plating is corrosion resistant

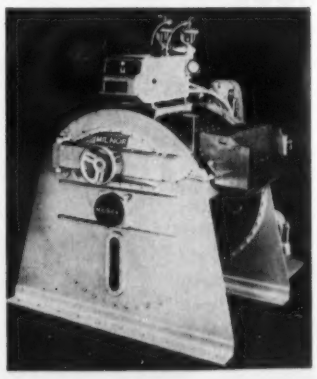


Wire parts and welded wire assemblies are now available with a brilliant, corrosion-resistant zinc plating in various colors. Immediately available are simulated brass and copper, and ice blue. Plating is particularly suitable for fan guards, decorative grills, or items used in the radio, television, and appliance fields. The in-process colors are durable and enhance appearance. Other platings available for Titchener wire products are olive drab, black, brass, cadmium, nickel, chrome, and Plastisol (black and white), plus barrel deburring and polishing. Offered by **E. H. Titchener & Co.**, 79 Clinton St., Binghamton, N. Y.

▲ For more details circle **NED-569 K8** on enclosed inquiry slip ▲

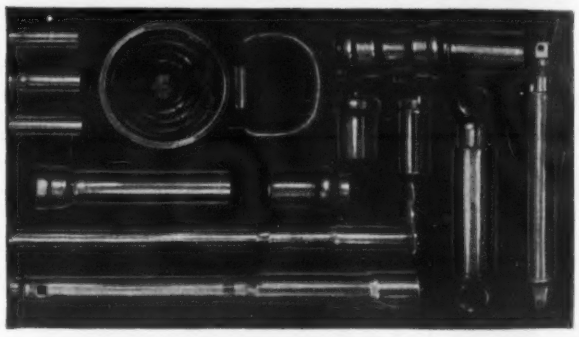
WASHER-EXTRACTOR

has 100-lb laundry capacity



Helical gear drive and a clutch which requires no adjustment are features of this 100-lb capacity, divided cylinder, combination laundry washer-extractor. Machine incorporates bearing seals that are effective regardless of water level or high speed water extraction. The open-end, stainless steel unit is automatic in operation. Made by **Pellerin Milnor Corp.**, Dept. 22, Box 7313, New Orleans 19, La.

▲ For more details circle **NED-570 K8** on enclosed inquiry slip ▲



Flange it . . . Flare it . . . Bend it . . . Expand it!

Republic ELECTRUNITE Mechanical Tubing

Fabricates easily . . . economically . . . with uniformity

For uniformity of wall thickness, strength, ductility, concentricity, diameter, and physical and mechanical properties—Republic ELECTRUNITE® Mechanical Tubing is your best buy. And as the world's largest producer of specialty welded tubing, Republic has the facilities, abilities and equipment to tailor the tube to your end use. Call your ELECTRUNITE distributor today.

Get facts, figures, data. Send for FREE 18½" x 20½" Republic ELECTRUNITE wall chart. Specify carbon or stainless steel.

REPUBLIC STEEL
STEEL AND TUBES DIVISION
233 East 131st Street • Cleveland 8, Ohio

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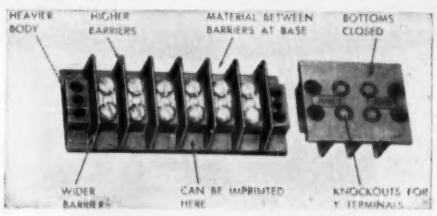
AT LAST—The IDEAL BARRIER TERMINAL STRIP



JONES 500 SERIES
LONGER—STURDIER

Wider and higher barriers for increased creepage distances. Closed bottoms for complete insulation. Material between barriers at the base adds to the strength and maintains the same creepage distance between contact to contact and contact to ground. Can be imprinted here. No insulating or marker strip required. Three series—540, 541 and 542 having the same terminal spacing as our 140, 141 and 142 series.

Complete listing in the new Jones No. 22 catalog. Write for your copy today.

Jones
HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

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KODAGRAPH MICRO-FILE EQUIPMENT

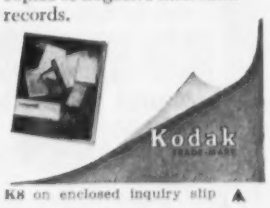
Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

- **Kodagraph Micro-File Machines**—three separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.

- **Kodagraph Micro-File Film**—extremely fine grained, high resolution. Assures sharp, crisp rendering of all details.
- **Kodagraph Film Readers,** which permit you to view your films quickly, conveniently.
- **Kodagraph Micro-File Enlarger,** which enables you to make paper enlargements from 16mm. and 35mm. microfilms which are comparable in clarity to the originals.
- **Kodagraph Print Film**—ideal for making positive copies of negative microfilm records.

***Write today** for new booklet—"Kodagraph microfilming for new economies in record keeping."*

EASTMAN KODAK COMPANY
Graphic Reproduction Sales Div.
Rochester 4, N. Y.



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Wherever Your Plant Needs AIR

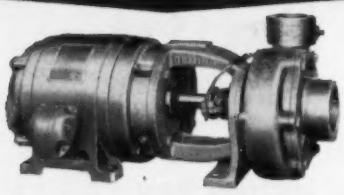
Sturdy, vibrationless Fuller Rotary Compressors provide pulsation-free air at lowest cost for all plant uses. The Fuller-pioneered rotary principle requires a minimum of moving parts, insuring high reliability and maintaining capacities for the life of the machine (pressures to 125 psig; capacities to 3300 cfm). C-307 3749

FULLER COMPANY 154 Bridge Street Catasauqua, Pa.
SUBSIDIARY OF GENERAL AMERICAN TRANSPORTATION CORPORATION
Chicago • San Francisco • Los Angeles • Seattle
Kansas City • Birmingham

PIONEERS OF HIGH-EFFICIENCY VANE TYPE ROTARY COMPRESSORS SINCE 1930

For more details circle NED-574 K8 on enclosed inquiry slip

DEMING
"MOTOR-MOUNT" CENTRIFUGAL PUMPS



"Motor-Mount" Centrifugal Pumps . . . ranging from 1½" to 5" discharge . . . capacities to 1200 gallons per minute. From 1 to 30 horsepower. Deming's complete line of pumps for industrial requirements includes:

- Vertical Turbine Pumps
- Multi-Stage High Pressure Vertical Centrifugal Pumps
- End-Suction Centrifugal Pumps
- Vertical Sump Pumps

For information and detailed specifications, contact your qualified Deming distributor or write:

THE DEMING COMPANY
520 Broadway • Salem, Ohio

For more details circle NED-575 K8 on enclosed inquiry slip

12 television coil tuners per carton

6 cartons per expendable pallet load

Paperboard Pallets reduce packing cost more than 1/3

Savings—in weight, in time, in materials, and in damage losses—savings are the reasons why Signode paperboard pallets take over more jobs every day. How come? *Because*

...they're light, but strong. A 10-lb. pallet can readily support 6,000 pounds. You can stack 1-ton unit loads 3 high!

...they're clean, smooth, easy to handle, space-saving, shock absorbing.

...they're *expendable*. No return or accounting or disposal problems. Your customers like this!

...they're available in sizes and shapes and strengths to meet your requirements without waste.

Let a local Signode Pallet Licensee design a unit load for your product that will produce maximum savings. For more information, write Signode.

Sponsored by Paperboard Pallet Manufacturers
in cooperation with
SIGNODE STEEL STRAPPING CO.
Dept. SP, 2643 N. Western Ave., Chicago 47, Ill.

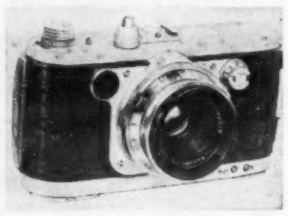
For more details circle NED-576 K8 on enclosed inquiry slip

FLOOR & PAVEMENT MARKER
is gasoline engine powered unit

Marking or striping of parking lots, cross walks, warehouse and plant aisles, and other areas is accomplished economically with this Model 3-10 Line Striper. The 3 - hp air - cooled gasoline engine has an automatic rewind type recoil starter. The adjustable striping guide insures accurately placed, 2 to 6-in. wide, straight or curved lines. Hand and self-propelled models have an 11.2-gal paint tank for painting up to 10,000 ft per hr. Available features include paint agitator, hand paint spray gun, outboard guns for striping close to curbs or buildings, and a rotary type reflective bead dispenser. Made by **M-B Corp.**, Dept. NED, New Holstein, Wis.

For more details circle NED-577 K8 on enclosed inquiry slip

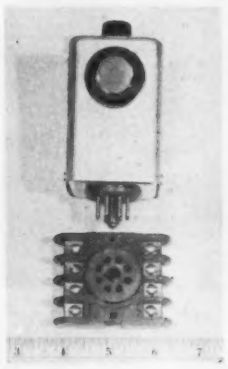
35-MM CAMERA
for automatic recording system use



Built-in spring motor for automatic film transport, shutter cocking, and film counting are features of the Robot Recorder 35-mm camera which suit it for electro-automatic recording system use. It can also be adapted to any photographic registration assignment. Stripped of rangefinder and viewfinder, it is available for 24 x 36-mm (double), 24 x 24-mm (square), and 18 x 24-mm (single) frame sizes. Shutter speeds range from ½ to 1/500 sec and B with built-in M and X synchronization. Interchangeable lenses range from 30-mm wide angle up to 300-mm telephoto. Electric and spring booster motors, 30 and 200-ft magazines for extended automatic runs, electro-magnetic remote release, timers, and Kinographic mechanism for sequence operations at up to 6 frames per second are among accessories. Distributed by **Karl Heitz, Inc.**, Dept. NDR-1, 480 Lexington Ave., New York 17, N. Y.

For more details circle NED-578 K8 on enclosed inquiry slip

PHOTOCELL RELAY
quick-acting, mounts in any position



Counting, lighting, sorting, safety devices, limit switches, measurement, and level control are applications for the Model R modular plug-in Photorelay. Solid state light receptor is a hermetically sealed cadmium sulfide cell with a S-15 spectral response. Sensitivity is adjustable for reliable operation on down to 1 ft-c. Quick-acting double-pole double-throw relay has contacts conservatively rated at 5 amp, 120 v ac. Mounting can be in any position. Weatherproof and Class I, Group D enclosures are available. Unit operates on any 110-v ac line. Companion Model RLB light source is available. Made by **Berkeley/Dynamics**, Dept. D, 2831 Seventh St., Berkeley 2, Calif.

For more details circle NED-579 K8 on enclosed inquiry slip

SAFETY SWIVEL HOOK
sizes rated from 1600 to 10,000 lb

Positive locking of this swivel safety hook for hoists or cranes assures safe operation. Hook will wedge if overloaded, and a load cannot be lifted without the gate or yoke automatically locking. Hook opens only manually. Eye hook is standard strength and drop forged, and the yoke is high-strength manganese bronze alloy. Smooth design allows full throat opening and also keeps the hook from catching on projections. Made by **Newco Mfg. Co.**, Dept. 1F, Box 5939, Kansas City 11, Mo.

For more details circle NED-580 K8 on enclosed inquiry slip

*Series H-Capacities from 2000 to 50,000 Pounds

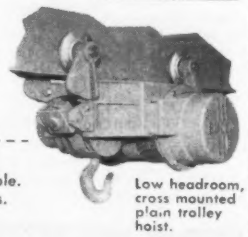
EUCLID HOISTS
for Dependable Service

These hoists are highly efficient and strictly modern in every detail with oversize anti-friction bearings and heat treated steel parts in combination with a welded frame.

The planetary gearing and mechanical load brake are mounted in oil tight housings. The hoist gearing is assembled in the hoist drum.

This design produces an unusually compact, rugged and accessible hoist readily adapted to various installations and types of control.

Write for Literature



Low headroom, cross mounted plain trolley hoist.

Various other standard and special heavy duty hoists available. Write regarding your requirements.

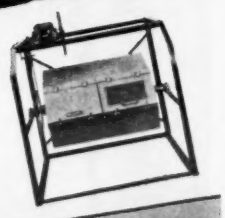
THE EUCLID CRANE & HOIST COMPANY
1362 CHARDON ROAD • CLEVELAND 17, OHIO

For more details circle NED-581 K8 on enclosed inquiry slip

H W Kramer
YOUR KEY TO BETTER FINISHING...

BUFFING LATHE
1 to 10 H.P. Ball Bearing V-Belt Drive. Pre-determined speed set at factory or to your specifications. Buffing wheels and compounds available for every industry . . . Special compounds recommended for Special applications.

SINGLE BARREL TUMBLER
Size: 30" x 36" or engineered to your specifications. Barrels lined with kiln-dried and glued maple. Child's play to operate. Economical on space as motors are individually mounted overhead—double decked or single. Tumbling supplies available also.



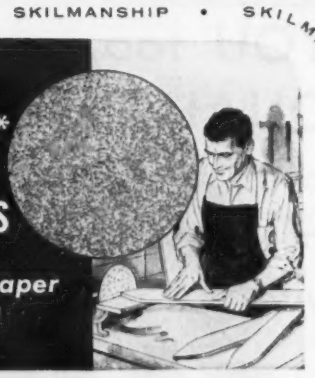
Write Dept. 12 for Detailed Information

H. W. KRAMER CO.
120-30 JAMAICA AVENUE
RICHMOND HILL 18, N. Y.

For more details circle NED-582 K8 on enclosed inquiry slip

SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

NEW PERMA-GRIT* Sanding Discs



outlast sandpaper 100 to 1!

Excellent results on wood, plastics, fiber glass, compositions

Revolutionary new process copper-bonds Tungsten Carbide particles to steel for sanding any material except metal. With these new Perma-Grit Face Discs you can eliminate the frequent changing of worn-out sandpaper discs.

One Perma-Grit disc will outlast hundreds of sandpaper discs! And, Perma-Grit sands twice as fast. It won't tear like sandpaper, never wrinkles and is never affected by moisture. Perma-Grit conducts heat away from work, reducing the possibility of scorching.

Available in 8", 9", 10" and 12" discs (coarse, medium-coarse and medium grits) from $5.60.

*Trademark of SKIL Corporation

Perma-Grit brand products are made only by SKIL Corporation, manufacturer of famous SKIL and SKILSAW Products, 5033 Elston Ave., Chicago 30. In Canada: 3601 Dundas Street West, Toronto 9, Ontario.

SKIL

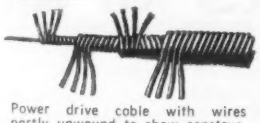
SKILMANSHIP • SKILMANSHIP • SKILMANSHIP • SKILMANSHIP

For more details circle NED-583 K8 on enclosed inquiry slip

STRENGTH WOUND INTO IT

Research has proved that a light flexible wire with several alternate layers of wire wound around it produces a cable more flexible than a single wire of the same diameter and is capable of carrying a much higher torque. Flexible shafts are composed of this type cable plus a flexible casing which provides protection from dirt, grime, or grease.

There are two types of flexible cables used in flexible shaft assemblies. One is the power drive flexible cable in which the wires are wound in alternate direction. The outer layer of wire determines the direction rotation and is made to tighten when in use to add strength and form a practically unbreakable unit. The main advantage of the power drive flexible cable is its simplicity of alignment, as it is capable of transmitting power over, under, and around any obstacle between the drive and the driven elements.



Power drive cable with wires partly unwound to show construction of the cable.

Section of remote control cable showing superimposed layers of wire wound in opposite direction.

The other type flexible cable is the remote control flexible cable which due to being constructed of smaller gauged wires than the power drive cable, and wound by a special process, provides for both rotation and reciprocation such as the opening and closing of a valve.

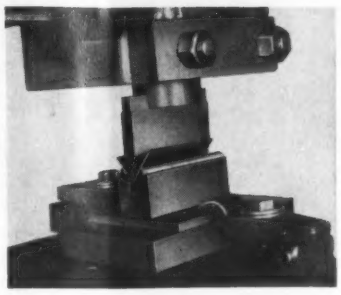
Both of these flexible shafts may function in a continuous or intermittent operation with a minimum amount of vibration. They not only offer long lasting strength but also economies in cost, time and space.

Send for further details on how flexible shafting may be easily and economically incorporated into your design.

Write F. W. Stewart Corporation, Dept. 5, 4311-13 Ravenswood Avenue, Chicago 13, Illinois.

▲ For more details circle **NED-584 K8** on enclosed inquiry slip ▲

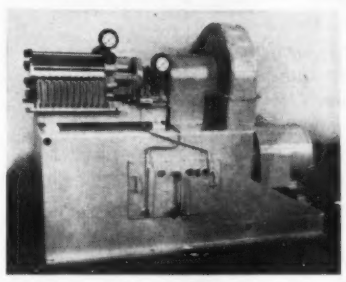
FEMALE PRESS BRAKE DIE
roll inserts eliminate work marking



Used in any mechanical or hydraulic press brake or punch press, this Di-Acro Rol-Form die features roll inserts which eliminate work marking and reduce die setup and changeover time. Dies are most practical where polished, painted, and bright metals are being formed. The half-round inserts housed in the die block roll up and toward the block opening as male die enters. They support the metal being formed for optimum uniformity of bend. Compression spring returns inserts to flat position. Four standard styles of dies vary in size from 1/4 to 1 in. They will form up to 60 degrees of bend. Standard die lengths up to 12 ft are available. Made by **O'Neil-Irwin Mfg. Co.**, 582 Eighth Ave., Lake City, Minn.

▲ For more details circle **NED-587 K8** on enclosed inquiry slip ▲

CONTINUOUS REACTOR
combines mixing with accurate process temperature control



Usable for emulsifying, cooling, and heating in the manufacture of such products as cosmetics, pharmaceuticals, greases, wax and photographic emulsions, starch pastes, and soap, this Flowmaster reactor combines continuous mixing with accurate process temperature control. In applications requiring reaction temperature control, it can be used for paint, plastics, polymerization, and sulphonation processes, and for modifying drying oils. It is also usable for synthetic fiber manufacture, dope heating and cooling, gel removal, texturizing and aeration, sterilizing and pasteurizing, and food product making.

It consists of a series of fixed heat transfer plates through which a heat transfer fluid may be circulated, or the plates can be heated electrically. Spaced between the plates are beaters mounted on a common shaft. They intensively mix the materials flowing through the channels. Machine handles pressures to 350 psi. Standard operating temperatures range from 32 to 400° F, but special machines can be made to handle pressures to 1000 psi and temperatures to 750° F. Sizes are built to individual requirements using 11 and 18-in. diameter heat transfer plates. Made by **Baker Perkins Inc.**, Chemical Machinery Div., 1001 Hess St., Saginaw, Mich.

▲ For more details circle **NED-588 K8** on enclosed inquiry slip ▲

Hamilton Industrial Trucks

Whatever your requirements . . . there's a Hamilton truck just right for your job! Ranging in load capacity up to 12,000 lbs., Hamilton trucks are available in hundreds of styles and sizes—platform trucks, box trucks, stake trucks, shelf trucks, 2-wheel hand trucks, wagon trucks, lift truck systems, dollies, barrel skids and many others. Special trucks of wood or steel are also designed and built by Hamilton to meet particular requirements. Look into Hamilton trucks before you buy! Be sure you get the right truck for your job! It can lower your costs substantially!

WRITE FOR THE Hamilton Catalog TODAY!

The Hamilton Caster & Mfg. Company
1766 DIXIE HIGHWAY, HAMILTON, OHIO

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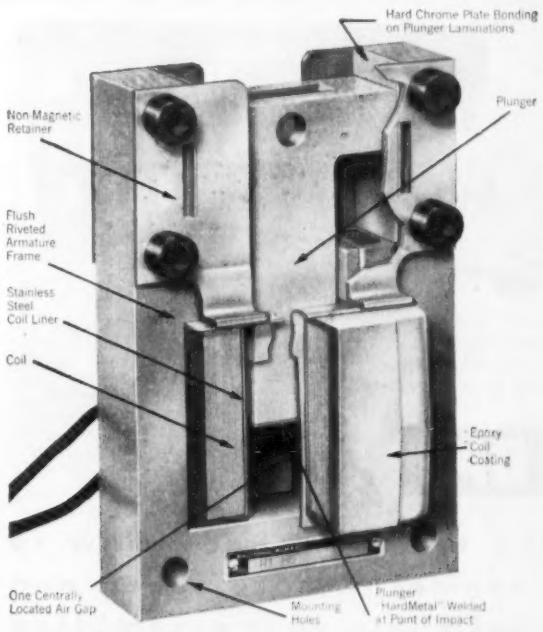
NEW! BATTERY OPERATED

This new 20" Clarke-A-matic — the only battery-powered maintainer on the market — scrubs, dries, polishes or steel wools up to 15,480 sq. ft. per hour, 5 to 15 times faster than hand methods. No electric cable to restrict maneuverability; no cable reel to obstruct operator's vision, no gasoline engine, no noise, no fumes — just quiet, fast, low cost operation. Write for details.

Clarke SANDING MACHINE COMPANY
2210 Clay Avenue, Muskegon, Mich.

Authorized Sales Representatives and Service Branches in Principal Cities
Distributed in Canada: G. H. Wood & Co., Ltd., P.O. Box 34, Toronto 14, Ont.

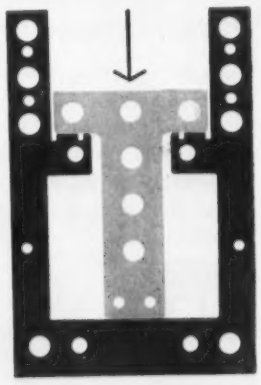
▲ For more details circle **NED-585 K8** on enclosed inquiry slip ▲



SOLENOID CHATTER ELIMINATED
with the NEW NAMCO "Hard Metal"-Welded Solenoid

. . . so quiet in its closed position, so rugged, so adaptable to any design problem, your application headaches are reduced to mere details!

The usual chatter and clatter in the closed position is eliminated by a unique design that provides a positive 3-point contact in the "holding position." Add to this Namco's exclusive "hard metal"-welded plunger bonding that prevents mushrooming at the vital point of contact, and the result is a *silent performer* you can't afford to overlook. Available in a wide range of types and sizes. Write for complete information.



National Acme
THE NATIONAL ACME COMPANY
182 E. 131st STREET
CLEVELAND 8, OHIO

▲ For more details circle **NED-590 K8** on enclosed inquiry slip ▲

NEW CUTLER-HAMMER SYNCHRONOUS CONTROL TIMERS

The new line of Cutler-Hammer Synchronous Control Timers come in one, three, and five minute models. All three are dimensionally identical and feature an exclusive combined terminal board and mounting base. This unique design provides more working-room during installation and on-the-job interchangeability of the timing units without disturbing the mounting base or wiring. The timer dial reads directly in seconds and one glance shows the exact time delay setting. These timers are simple to set too. Just rotate the bronze pointer to the dial position indicating the precise elapsed time desired and the job is done . . . no approximations or tedious readjustments.

The sweep-second pointer counts off the seconds during each timing cycle. Automatic reset returns the pointer to the start position after each cycle or if a power interruption occurs while in operation . . . no undertimed cycles possible. These synchronous motor driven timers work better and last longer too. Dust, dirt, and atmospheric conditions can't interfere with the timing mechanism. For further information write today for Bulletin EN33-U251. Cutler-Hammer Inc., Milwaukee 1, Wisconsin.

One minute timer: Adjustable in one second increments, 0 to 60 seconds. ***Three minute timer:*** Adjustable in three second increments, 0 to 180 seconds. ***Five minute timer:*** Adjustable in five second increments, 0 to 300 seconds. All three models use the same mounting base and can be interchanged without disturbing the mounting base or wiring.

CUTLER-HAMMER CONTROL C-H

Cutler-Hammer Inc., Milwaukee, Wis. *Division:* **Airborne Instruments Laboratory.** *Foreign:* **Cutler-Hammer International, C. A.**
Associates: Canadian Cutler-Hammer, Ltd.; Cutler-Hammer Mexicana, S. A.; Intercontinental Electronics Corporation, Inc.

▲ For more details circle **NED-586 K8** on enclosed inquiry slip ▲

Automatic Feeding for punch press profit!

Short run jobs—produced with long-run economy on the new U. S. SLIDE FEEDS.

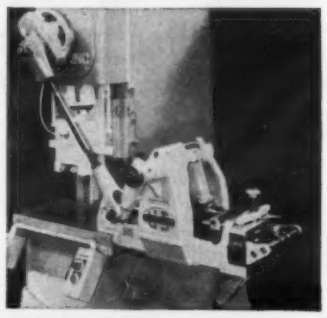
NEW U. S. SLIDE FEED features reduce press room costs . . . increase production because . . .

1. LESS TIME NEEDED FOR CHANGEOVER.
2. QUICK, VISUAL FEED LENGTH SETTING.
3. SIMPLE STOCK THICKNESS ADJUSTMENT.
4. UNSURPASSED ACCURACY—WITH OR WITHOUT PILOTS.
5. MORE POSITIVE CHECK.

The U. S. Slide Feed, Model S. F.-68A, illustrated here, feeds stock widths up to 6" and has a maximum feed length stroke of 8". Available for immediate delivery.

For complete information about the new U. S. Slide Feeds, write for Bulletin No. 101. Information concerning other U. S. Press Room equipment is yours by asking for Bulletin No. 85N.

write for details to dept. 58-J 6.



U. S. TOOL COMPANY, INC.
AMPERE (EAST ORANGE) NEW JERSEY
U. S. Multi-Sliders® • U. S. Multi-Millers® • U. S. Automatic Press Room Equipment • U. S. Die Sets and Accessories

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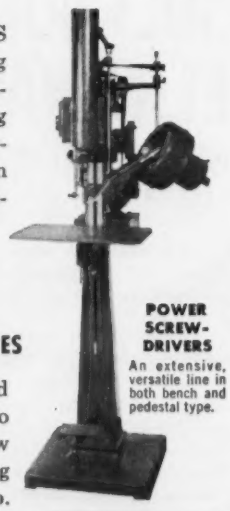
DPS *has*

the technical know-how to "*engineer*" more speed and profit into your assembling operations.

• The signal success of DPS trained engineers in adapting power equipment to the individual feeding and assembling needs of industrial plants everywhere is assurance that they can likewise solve your special problems. In our broad line of

SELECTIVE PARTS FEEDERS
POWER SCREWDRIVERS
SPECIAL ASSEMBLING MACHINES

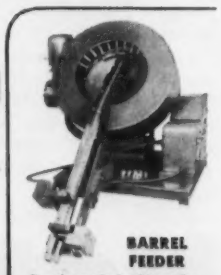
equipment can be selected, and custom features incorporated, to fit your requirements. Plan now to use DPS modern assembling methods. Tell us your set-up. Write for catalog and further details.



POWER SCREW-DRIVERS
An extensive, versatile line in both bench and pedestal type.

BOWL FEEDER
Electrical vibratory type to feed parts that cannot be tumbled.

BARREL FEEDER
with stationary ring cover for heavy-duty production.



BARREL FEEDER
Popular motorized type, for parts requiring critical selection.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT STREET • DETROIT 16, MICHIGAN

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TOOL SHARPENING KIT
includes diamond wheel and chuck

A demountable precision diamond wheel and magnetic chuck, plus all accessories for finish grinding carbide cutting tools, are contained in this sharpening kit. Chuck can be used with Pensco single or triple layer, or impregnated diamond grinding rings for cushioned grinding, and adapts to all 6-in. carbide tool grinders. It permits instant changing of grinding rings without additional truing-up of the wheel. Wheel rings are offered in various grit sizes and snap instantly into place. Other items in kit are a single layer diamond grinding wheel ring, diamond ring lap attachment, lapping compound, roller, lapping oil, thinner, oil applicator, and wheel dressing stick. Made by **Penn Scientific Products Co.**, 1000 Old York Rd., Abington, Pa.

▲ For more details circle NED-594 K8 on enclosed inquiry slip ▲

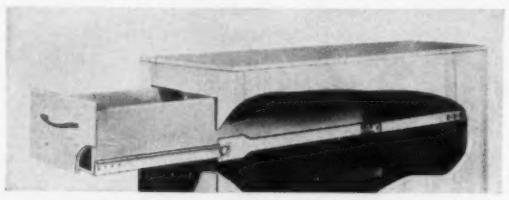
INDUSTRIAL CLEANER-BLOWER
handles wet or dry vacuum pick-up

This Model 101 Ace industrial cleaner-blower can be used for wet or dry vacuum cleaning of floors, walls, ceilings, shelves, bins, machinery, or equipment. It has a 1⅓-hp motor mounted on either a baked enamel tank for dry service or on a stainless steel tank for wet or dry cleaning. It has 15-gal capacity, and machine is fully mobile. Motor-blower can be removed and used as a hand-held unit for blowing, vacuuming, or spraying. Various cleaning attachments are available. Made by **Ace-Sycamore, Inc.**, 448 DeKalb Ave., Sycamore, Ill.

▲ For more details circle NED-595 K8 on enclosed inquiry slip ▲

DRAWER SLIDE
has nylon rollers, is self-aligning

Drawer mounted on this self-aligning, nylon roller-equipped drawer slide is easily inserted and removed. Formed lips of tracks fit along the underside of the



drawer to eliminate need for measuring and leveling. Cabinet tracks mount on bottom rail, flush with the drawer opening. Each slide fastens with four screws, and slotted screw holes permit easy adjustment. Only ½-in. clearance is required on each side for installation. Drawer tracks provide automatic centering action. Standard 18, 20, 22, and 24-in. slides can carry a 50-lb load. Made by **Amerock Corp.**, Dept. NED 89, Rockford, Ill.

▲ For more details circle NED-596 K8 on enclosed inquiry slip ▲

DIRECT-WRITING OSCILLOGRAPH
records dc to 60 cps signals

Useful for recording various transducer outputs, Model ER-22 direct-writing oscillograph will record signals from direct current to 60 cps. Unit is available with coil resistances from 215 to 4000 ohms and with a resonant frequency of 30 cps. A 100-ma current through a 215-ohm coil provides full scale deflection of 40 mm with 2 per cent linearity. Electro-sensitive paper provides on-off indications in addition to waveform data. Low-cost clip-in motors allow wide range of chart speeds. Companion amplifiers are designed so that the oscillograph can be used integrally with them, or remotely. Made by **Mandrel Industrial Instruments**, Dept. P, 5134 Glenmont Dr., Houston 36, Tex.

▲ For more details circle NED-597 K8 on enclosed inquiry slip ▲

SUTORBILT IS WELL BUILT

SUTORBILT
BLOWERS for air

- Rotary positive displacement
- No internal lubricant
- Delivers clean, dry air
- Heavy duty anti-friction roller bearings
- Wide-face herringbone gears
- Exclusive Sutorbilt Timing Hub
- Capacities up to 20,000 cfm . . . to 10 psig
- Write for bulletin on blowers and gas pumps

Representatives located in principal cities. Consult your classified telephone directory.

1166 S-13

SUTORBILT CORPORATION, 2966 EAST VICTORIA ST., COMPTON, CALIF. SUBSIDIARY OF FULLER COMPANY

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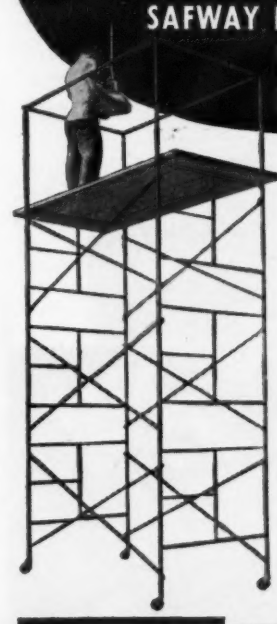
Cut Overhead Working Time!

SAFWAY LOW-COST TOWERS ROLL TO THE JOB, REACH HIGH WORK



MAINTENANCE MEN get around faster with a safe, handy Safway rolling scaffold tower!

Towers roll to the job on big swiveling casters and lock firmly for climbing and work completion...then unlock to follow the work or move on to another job.

Interchangeable steel scaffold parts assemble to any tower height or shape. Platform supports every 16 in. Built-in climbing ladder; 40" high guard rail.

For top economy, low-cost *"packaged"* towers are available in three useful heights—8 ft., 12 ft. and 16 ft. Base area 4 x 7 ft. Tower illustrated is 12 ft. high-

SAFWAY STEEL PRODUCTS, INC.
6213 W. State St., Milwaukee 13, Wis.

Write for FREE BULLETIN 810

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SHAFT MOUNTED

NO TORQUE ARM REQUIRED

Peerless® CENTER LINE DRIVE SPEED REDUCERS

97+% EFFICIENT

- GREATER POWER OUTPUT
- ROLLER BEARINGS ON INPUT AND IDLER SHAFTS
- POSITIVE LUBRICATION WITH OIL SIGHT PLUG
- DEPENDABLE LONG LIFE PROVEN BY THOUSANDS IN DAILY USE SINCE 1946
- PRECISION MACHINED ALLOY GEARING
- LARGE "OILITE" OUTPUT BEARINGS
- OUTPUT SPEEDS VARIABLE THRU "V" BELT PULLEYS
- SOLVE YOUR COST PROBLEM WITH A PEERLESS "CENTER LINE DRIVE" SPEED REDUCER

STANDARD MODELS ¼ To 10 H.P.

15 to 1 RATIO

HIGHEST QUALITY — NEW LOW PRICES

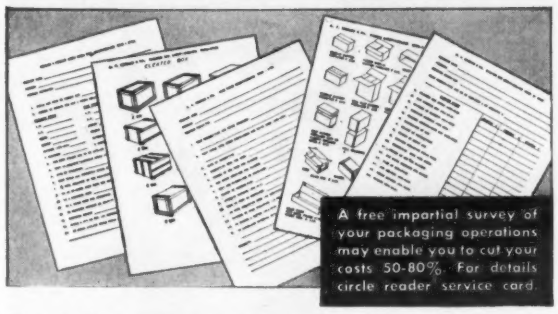
WRITE FOR BULLETIN No. 316

PEERLESS GEAR & MACHINE CO., INC.
140-150 E. WAYNE ST.
DUNKIRK, OHIO
PHONE 3101

Registered U.S. Pat. Office

▲ For more details circle NED-600 K8 on enclosed inquiry slip ▲

Want to cut your packaging costs?



Today's tight profits mean that cutting costs is imperative. A re-evaluation of your packaging methods, for example, might show that through the use of A. J. Gerrard's modern strapping techniques, you can eliminate costly carton set-up time; or, that you can save as much as 50 to 80% on strapping materials with our new *oval* strapping. In any case, by reviewing your present methods with an A. J. Gerrard packaging specialist, he'll undoubtedly help you uncover *many* avenues for reducing costs.

A personalized survey of your operation is available free and with no obligation . . . simply circle the reader service card.

FREE NEW CATALOG

A. J. GERRARD AND COMPANY

1954 Hawthorne Boulevard • Melrose Park, Illinois

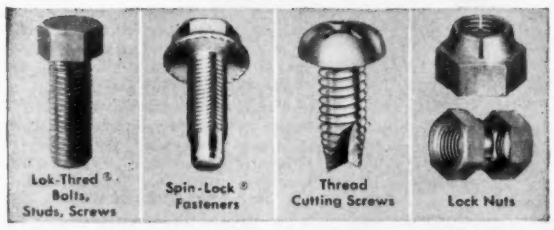
▲ For more details circle NED-601 K8 on enclosed inquiry slip ▲

Your one source is

NATIONAL for

STANDARD or SPECIAL

FASTENERS



Regardless of your fastener requirement National can save you time and trouble. *Write* for National's Special Products booklet, or for information on the fastening specialty that interests you.

THE NATIONAL SCREW & MFG. CO. • CLEVELAND 4, OHIO

Pacific Coast: National Screw & Mfg. Co. of California
3423 South Garfield Ave., Los Angeles 22, California

National PRODUCTS — Fasteners — Hodell Chains — Chester Hoists

▲ For more details circle NED-602 K8 on enclosed inquiry slip ▲

Cut ANY Shape in Metal...

with a BEVERLY THROATLESS SHEAR!

- Capacities to 3/16" in mild steel
- Make clean, knurl-free cuts in any metal to capacity
- High Carbon High-Chrome Blades
- Built to last a lifetime

Here's What a Beverly Can Do!

Cuts made in 18 ga. metal with Model B-1

Model B-3 with Ball Bearing Hold Down

Beverly Shears are the most versatile metal shearing tools you can use. Unique shoulder design permits any cut . . . rack and pinion gives great power with little effort. Alloy steel body for maximum rigidity and strength. Made in 4 models.

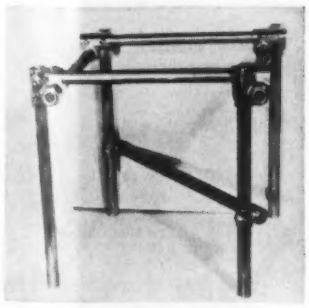
Write for illustrated circular —or see your Beverly Distributor.

Beverly SHEAR MFG. CO.

3016 W. 111th Street Chicago 43, Ill.

▲ For more details circle NED-603 K8 on enclosed inquiry slip ▲

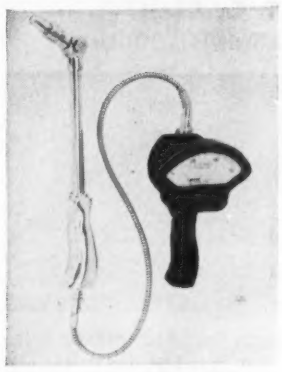
SLIP TYPE PIPE FITTINGS
make racks, railings, and scaffolds



Hosking Tapered Diamond slip fittings, made of high tensile aluminum alloy, are used with any type of pipe or tube to build storage racks, railings, buildings, temporary shelters, guards, and scaffolding. The screw housing covers about 30 per cent of the fitting barrel for high holding power and load carrying capacity. All structures made with the fittings are quickly assembled and disassembled. Their cup-point socket set screw in a tapered diamond-shaped boss holds the pipe with a grip that exceeds 2 tons. Variety of fittings assures versatility. Distributed by **Wallace Supplies Mfg. Co.**, Dept. NED, 1304 Diversey Parkway, Chicago 14, Ill.

▲ For more details circle NED-604 K8 on enclosed inquiry slip ▲

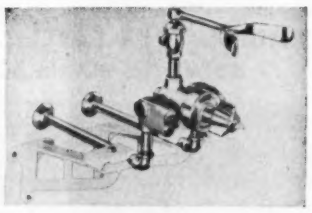
PORTABLE PYROMETER
offered in twelve scale ranges



No power source is required to operate the Model B portable hand pyrometer, offered with accessories varying from flexible or rigid arm extensions to a variety of thermocouples. It can be used for measuring temperatures of convex, rotating, or flat surfaces; and for plastics, rubber or semifluids, liquids, gases, or molten metals. Each of the 12 scale ranges offered is automatically compensated for changes in ambient temperature. Made by **West Instrument Corp.**, 4363B W. Montrose Ave., Chicago 41, Ill.

▲ For more details circle NED-605 K8 on enclosed inquiry slip ▲

WATER MIXER
knee-operated thermostatic type



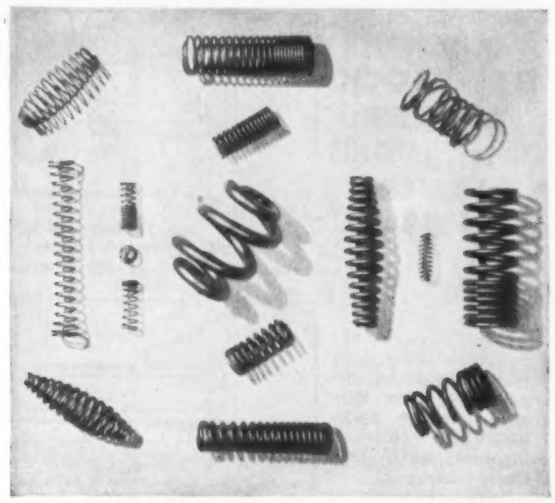
Once the Type H Hydroguard thermostatic mixing valve has been set to provide the water temperature desired up to 110° F, the user moves the volume lever with his knee to turn it on and off. His hands are free to hold or manipulate work. Preset water temperature is provided, regardless of fluctuations in supply temperature and pressure. Unit has a 10-gpm capacity at 45 psi and is accurate to within ±½° F. It can be set between 65 and 110° F. A built-in shut-off stops water flow if the temperature exceeds 110° F. Made by **Powers Regulator Co.**, Dept. NDC, 3434 Oakton St., Skokie, Ill.

▲ For more details circle NED-606 K8 on enclosed inquiry slip ▲

LIQUID NITROGEN GENERATOR
unit functions without attention

Complete nitrogen liquefying facility is provided by the ADL liquid nitrogen generator system, a pushbutton start and stop unit with automatic controls for extended operation without attention. Major components include an ADL nitrogen column, modified Norelco gas liquefier, and a 200-liter storage tank. Equipment automatically provides up to 95 liters daily of 99.5 per cent pure liquid nitrogen. Blower supplies oil-free air, from which water vapor and carbon dioxide are frozen out in the heat exchanger. Air is rectified in a packed column, and the high-purity nitrogen gas is liquefied. Made by **Arthur D. Little, Inc.**, Dept. MD, 20 Acorn Park, Cambridge 40, Mass.

▲ For more details circle NED-607 K8 on enclosed inquiry slip ▲



Compression Springs

Before your designs are frozen, check with our engineers for possible savings. Proper material selection is important. Unnecessarily close tolerances add to cost. Send for pamphlet "Spring Design and Selection—in brief."

Associated Spring Corporation

General Offices
Bristol, Connecticut

6819

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For air line lubricators... there's

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With Gits, your Inventory's small:

JUST 1 SIZE HANDLES ALMOST ALL!

FOR AIRLINE LUBRICATION, GET THE DOPE ON GITS COMPLETE MATCHED SET, THIS NEW FREE CATALOG TELLS MORE, YOU'LL FIND ADVANTAGES* GALORE.

*Minimum Lubrication Waste, Minimum Pressure Drop, Instant Starting and many more.

GITS BROS. MFG. CO.

Pneumatics Division
1833A South Kilbourn Avenue
Chicago 23, Illinois

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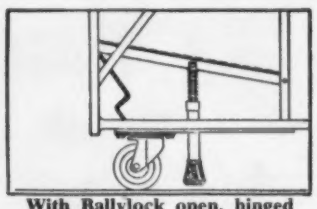
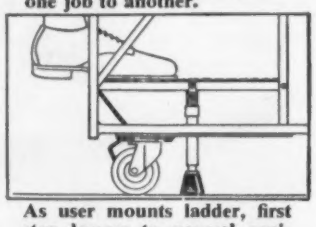
NEW BALLYLOCK MAKES "Hi-boy" LADDERS EASIER TO USE!



With Ballylock open, hinged first step and rubber-tipped legs are slightly raised. Ladder rolls easily and quickly from one job to another.



As user mounts ladder, first step lowers to normal position, the legs descend to grip the floor firmly, and a latch engages securely. To release, touch Ballylock with foot.

Ballylock "Hi-boy" Safety-Step Ladders equipped with a new locking device — the Ballylock—help make maintenance and repair jobs faster than ever. The new Ballylock works with amazing ease and is absolutely foolproof.

"Hi-boy" Ladders are available in the new pyramid design from 8 to 12 steps for average work levels up to 15 ft.

Get more information. Write for new Catalog. The Ballymore Company, West Chester 3, Pa.

BALLYMORE
EQUIPMENT FOR ABOVE-FLOOR WORKING SAFETY
THE STANDARD BY WHICH ABOVE FLOOR SAFETY IS JUDGED
DISTRIBUTORS IN PRINCIPAL CITIES

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Rapistan

REMOVES the KING-PIN
To give better load distribution

NEW!
3100 Series gives you all these benefits

Longer Life—new design already has demonstrated notable performance superiority over other single ball race casters.
Easier Swiveling—no binding . . . no metal-to-metal friction, because there is NO king pin!
Better Load Distribution—more dependable service, because the hardened swivel bearing raceway supports the load. Resists ball indentation.
Simplifies Your Caster Problems—serves scores of general duty applications up to 500 lbs. capacity. Available with six wheel sizes ranging from 2½" to 6" diameter.

Write for 3100 Series Bulletin

Rapistan — fastest growing name in casters
The RAPIDS-STANDARD CO. INCORPORATED
445 Rapistan Bldg.
Grand Rapids 2, Michigan

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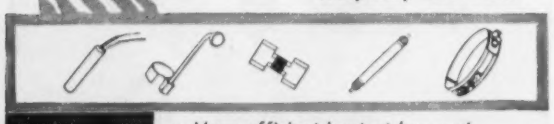
WATLOW

the line COMPLETE for ELECTRIC HEAT

- CARTRIDGE
- IMMERSION
- STRIP
- TUBULAR
- CYLINDRICAL

For electric heat of any kind ...specify WATLOW



YOU GET
- *More efficient heat at less cost*
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WATLOW
ELECTRIC MANUFACTURING CO.
1374 Ferguson Avenue
Saint Louis 14, Missouri

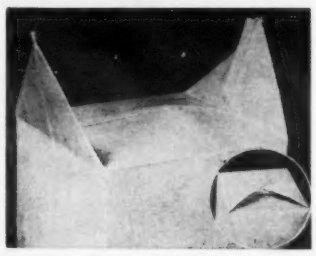
▲ For more details circle NED-612 K8 on enclosed inquiry slip ▲

MACHINE POSITIONING SYSTEM
uses dial-set analog programming

Short-run production operations such as punching, drilling, and inserting can be automated by an automatic point-to-point positioning system with simple dial-set analog programming. The system offers time-saving direct, uncoded programming for repetitive and symmetrical motion patterns. For example, a set-up involving five different dimensions and three repeat commands can be programmed by setting eight adjustment dials. Variations can be made by resetting dials. Positioning is by electro-hydraulic servo systems which have a speed of 0.2 sec per basic motion and an accuracy of 1 part in 1000. Infinite adjustability is attainable for longitudinal and transverse axis movements. System is also available for random instruction (nonrepetitive) or contour programming. Made by **CDC Control Services, Inc.**, 623 S. Warminster Rd., Hatboro, Pa.

▲ For more details circle NED-613 K8 on enclosed inquiry slip ▲

ONE-PIECE ASPHALT CARTON
kraft board type holds 100 lb



Made of 0.030-in. thick solid virgin kraft container board, this one-piece, sewn-bottom carton for asphalt adapts to any type of filling operation. With a silicone release coating applied to the inside, the 100-lb capacity carton releases clean and easy. Supplied with or without top flaps, carton is shipped knocked-down flat. It rounds out when filled to facilitate rolling. Glued manufacturer's joint eliminates the possibility of leaks. Bottom string-sewn joint is folded over at 90-degree angle before it is stitched in place. Cartons withstand all kinds of weather for up to 6 months without adverse effect on itself or contents. Made by **Gaylord Container Corp.**, 201 Cotton Belt Bldg., St. Louis 2, Mo.

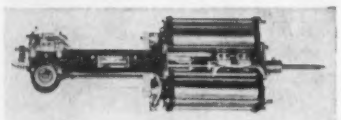
▲ For more details circle NED-614 K8 on enclosed inquiry slip ▲

RADIAL TYPE LEVEL
accurate within 60 min of arc

Top and mounting flange of this radial type level are injection molded of transparent Plexiglas acrylic plastic to permit full visibility of the bubble. Bottom is opaque white Plexiglas. Level resists breaking and is accurate within 60 min of arc. An epoxy resin seals the low freezing point, uniform viscosity, nonfoaming indicating liquid into the level. If desired, it can be mounted on equipment. Price is 98 cents. Made by **Johnson Products Co.**, Dept. NED, 1670 N. Jackson, Milwaukee 2, Wis.

▲ For more details circle NED-615 K8 on enclosed inquiry slip ▲

DRILL PRESS FEED
attachment is air-operated



Automatic or semi-automatic precision control of spindle feed and retraction on standard single and multiple spindle machines is function of heavy duty drill press air feed attachments. The conversion package is easily installed on any make of heavy duty drill press to produce up to 2000-lb drill point pressure. Feed is powered by twin double-acting pneumatic cylinders in tandem, with a hydraulic checking mechanism supported between the cylinders. Cylinders operate at up to 100 psi. A Micro-Valve maintains uniform control of air pressure under heavy machining operations for accuracy in tool feeding. The spindle automatically retracts to the starting position after reaching a preset depth limit. Made by **Cleveland Pneumatic Industries, Inc.**, Renco-Aire Div., 64 Old Orchard, Skokie, Ill.

▲ For more details circle NED-616 K8 on enclosed inquiry slip ▲

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GAST Rotary-Vane AIR PUMPS

Here's the broad Gast Line of Air Compressors. Vacuum Pumps, too, are made in all these models. Capacities from .6 to 45 cfm., pressures to 30 psi., vacuum to 28" Hg. Rotary-vane design is simple, efficient, dependable. Positive, pulseless air delivery—no tank needed. For plant use or O.E.M., *get Gast quality!*

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GAST MANUFACTURING CORP., P.O. Box 117-R
Benton Harbor, Michigan

See Catalog in Sweet's Design File

GAST ROTARY
- AIR MOTORS TO 7 H.P.
- COMPRESSORS TO 30 P.S.I.
- VACUUM PUMPS TO 28 IN.

"Air may be your answer!"

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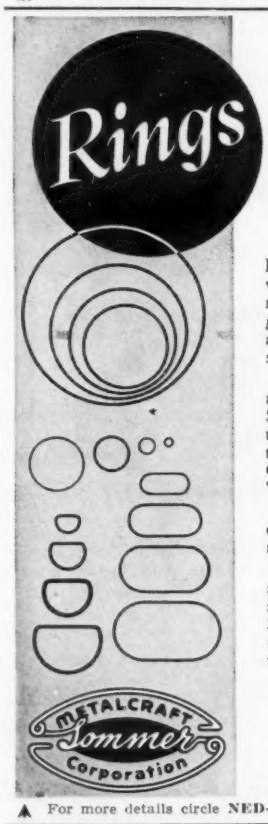

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Let Sommer solve your ROUND wire ring problems—including ring assemblies such as fan guards, grills, etc. Butt-welded and unwelded rings are our specialty.

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METALCRAFT CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

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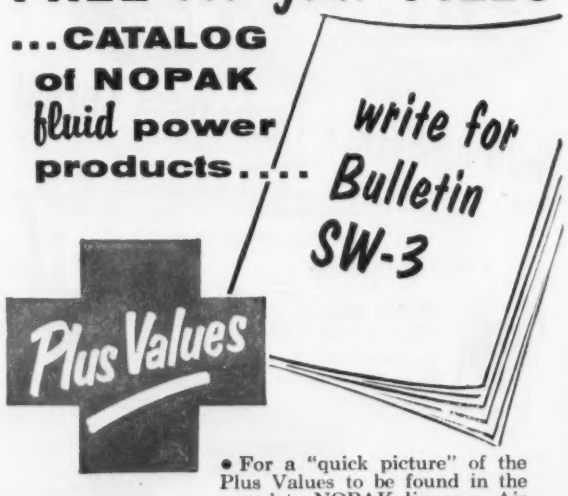
write for Bulletin SW-3



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NOPAK *VALVES and CYLINDERS*
GALLAND-HENNING NOPAK DIVISION
2755 South 31st Street • Milwaukee 46, Wisconsin

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custom assemblies with standard units Our Specialty

We invite you to submit your difficult conveying problems to our engineers. There is no obligation.

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MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES
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For more details circle NED-620 K8 on enclosed inquiry slip

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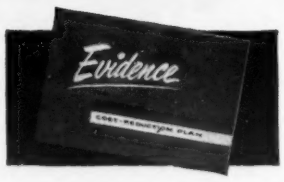
Give added protection with the JOMAC COST-REDUCTION PLAN

Customer: leading automobile manufacturer. Operation: fabricating major body components. This is just one more case where the Jomac Cost-Reduction Plan is saving money and increasing worker safety in industry. Write for "Evidence" booklet shown opposite. It will show you how this plan can work in your plant too! Write to Dept. G, Phila. 38, Pa.



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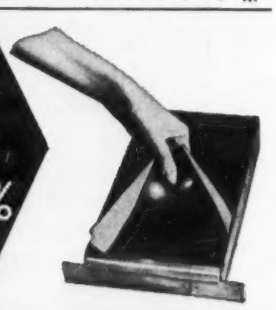
JOMAC INDUSTRIAL GLOVES
Plants in Philadelphia, Pa., and Warsaw, Ind.
In Canada: Safety Supply Company, Toronto
In Europe: North-Jomac Ltd., London, W1

For more details circle NED-621 K8 on enclosed inquiry slip

REDUCE CLEAN-UP TIME 50%



a thin film of

RELEASE-COTE

on any surface sheds residue glues, adhesives, plastic coatings, inks, paints . . . like magic!

● Machines last longer because RELEASE-COTE repels coating materials, eliminating build-ups that tax motors and moving parts.

● Operators love RELEASE-COTE's gentleness to their hands. A little rubbed on the hands prevents coating material from sticking to the skin and nails.

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Distributed by
POTDEVIN MACHINE CO.
273 North Street, Teterboro, N. J.
Designers and manufacturers of equipment for gluing and labeling, coating, laminating, bag making and printing.

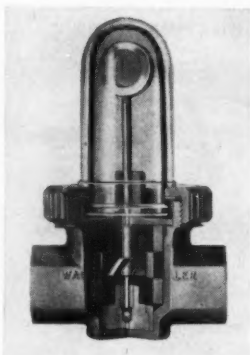
For more details circle NED-622 K8 on enclosed inquiry slip

PAINTER'S MITT
for pipe and contour painting jobs

Contoured, irregular, and hard-to-reach surfaces and piping can be efficiently painted by the Bestt painter's mitt, made of lambskin. Its use eliminates splashing, minimizes the quantity of paint used, and enables matching the texture of roller painting. Two styles, with or without thumb, are offered. Reversible thumbless model has slightly rounded square ends for reaching flush into corners. Mitt will apply most enamels, stains, and varnishes to all types of surfaces. It is cleaned in regular paint thinner. Price is $2.15. Made by **Bestt Rollr Co.**, 160 S. Brooke St., Fond du Lac, Wis.

For more details circle NED-623 K8 on enclosed inquiry slip

FLOW INDICATORS
have adjustable range



Clearly visible from a distance, even in poor light, Arkon flow indicators have a chromium plated ring which spins under a hardened glass dome. Variable flow models can be reset in the field and are available with a die cast brass body in ½, ¾, and 1-in. pipe sizes for flows from 0.72 to 24 gpm. Other models have flow from 0.075 to 120 gpm in pipe sizes up to 3 in. Applications include indication of circulating water or oil in air compressors, engines, jacketed vessels, electronic equipment, gear trains, bearings, and transformers. Made by **McIntosh Equipment Corp.**, Walker Crosweller Div., Dept. NED, 15 Park Row, New York 38, N. Y.

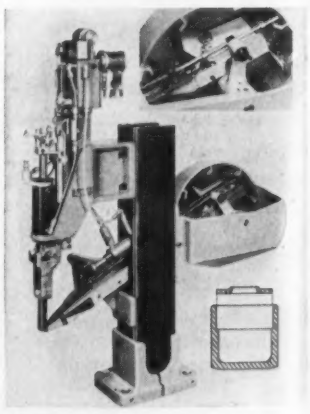
For more details circle NED-624 K8 on enclosed inquiry slip

SUBMICRON FILTER
handles from 25 to 100 gpm

Usable in laboratory work, for pharmaceutical manufacturing, and wherever exceptionally pure water is needed, Model MF-25 submicron filter removes particulate matter down to 0.45 micron. It uses Millipore cellulose ester filter media and block tin lined bronze construction. Long legs facilitate placing of containers underneath and use of hoses. Optional constructions include Teflon, Kel-F, or nickel linings or stainless steel and aluminum bodies. Made by **Barnstead Still & Sterilizer Co.**, 103 Lanesville Terrace, Boston 31, Mass.

For more details circle NED-625 K8 on enclosed inquiry slip

AUTOMATIC ASSEMBLER
handles 1/16 to 2-in. parts



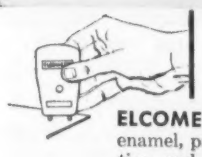
Automatic parts positioning head and a parts feeder which guides parts into place comprise the improved Auto - Positioner, an automatic assembly machine. Both units are mounted upon a dual column and are actuated by compressed air. Parts ranging from 1/16 to 2 in. are handled from feeder to fixture at speeds up to 6000 per hour. A built-in sensing mechanism stops the machine if a part is missing or malformed. The Auto-Positioner can be furnished as a single station with floor mount and a foot treadle for initiating the cycle, or as a fully automatic station with a solenoid valve to start the cycle. Made by **Dixon Automatic Tool, Inc.**, 2302 23rd Ave., Rockford, Ill.

For more details circle NED-626 K8 on enclosed inquiry slip

NEW pocket-size THICKNESS GAUGE

For flat or curved surfaces

Only $75.00 F. O. B. Cleveland



Measures Nonmagnetic Coatings with ± 5% ± .0001" accuracy

ELCOMETER measures thickness of porcelain enamel, paints, platings, foils, glass, paper, plastics, and other nonmagnetic coatings quickly and accurately. Gauges flat or curved surfaces and hard-to-get-at spots easily. Needle locking device assures correct reading every time. Complete with leather case containing inner pocket for test strips. Weighs only 6 oz. Completely self-contained.

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FERRO CORPORATION
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For more details circle NED-627 K8 on enclosed inquiry slip

Are you STUMPED FOR THE RIGHT TOGGLE CLAMP?...

Got a tough work-holding job that's bothering you . . . one which needs quick-acting and powerful clamping?

It's 100 to 1 you'll find the answer among 120 standard DE-STA-CO Toggle Clamps and scores of spindle accessories.

Even more! Our engineers will give you suggestions if you send a print or rough sketch.

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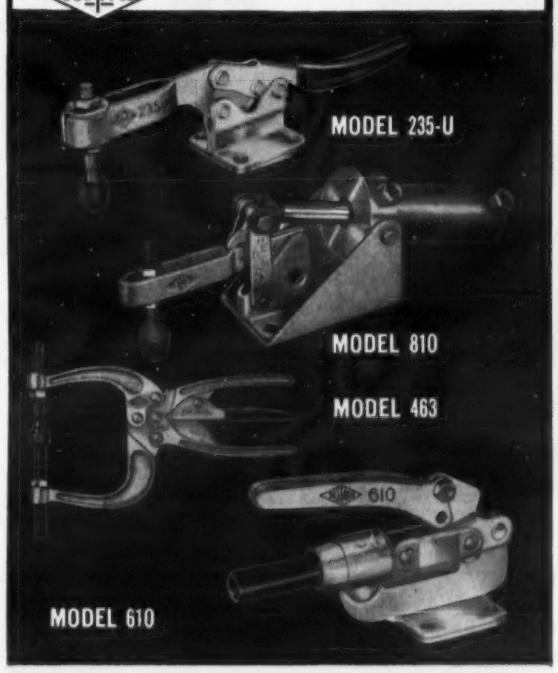
DE-STA-CO 4 TYPICAL CLAMPS



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Manufacturer of America's FIRST Line of TOGGLE CLAMPS
360 Midland Avenue
Detroit 3, Michigan

TRY... DE-STA-CO TOGGLE CLAMPS

For more details circle NED-628 K8 on enclosed inquiry slip

A "Sciaky-Quality" Spot Welder for as low as $1696.00*

NEW CONTROLS — Sciaky plug-in units, featuring rugged, advanced electronic components with printed circuits!

NEW WELD QUALITY STANDARDS — within the limits of its capacity the Sciaky SR O produces high quality spot welds of maximum reliability.

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NEW JOB VERSATILITY—choice of models available to meet a broad range of requirements.

PLUS . . . FAMOUS SCIAKY RELIABILITY — Sciaky features, already proved in the aircraft industry, provide unusually consistent trouble-free operation.

WRITE OR CALL TODAY FOR SPECIFICATIONS & PRICES!

*30 KVA model with 12" throat depth, NEMA-IA control and size "A" ignitron contactor. Same machine with transistorized NEMA-3B control, $1940. Prices F.O.B. Chicago; subject to change without notice.

71E abr.

SCIAKY BROS., INC. 4920 W. 67th St., Chicago 38, Ill.

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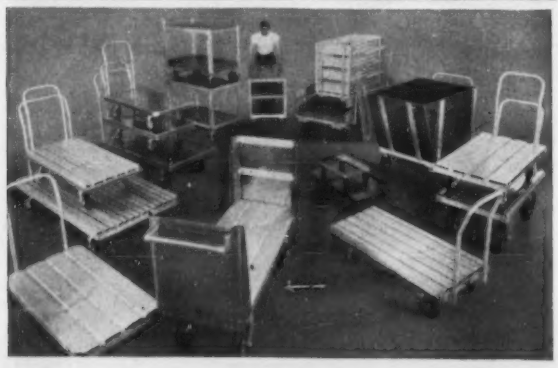
▲ For more details circle NED-630 K8 on enclosed inquiry slip ▲



With lightweight Magcoa trucks—

You move more payload!

MOVE PAYLOAD, not heavy truck weight. *Featherweight* Magcoa aluminum trucks are *easier to push* . . . easier to steer. No need to hinder employee efficiency with heavy truck weight—move *more* loads, faster with weight-saving Magcoa trucks. And . . . Magcoa trucks are practically maintenance-free for their entire life. Worth investigating. For details and specifications on the full range of standard styles and sizes available, simply circle the reader service card, or write direct.

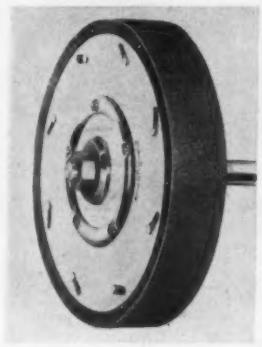
magcoa

MAGNESIUM COMPANY OF AMERICA
East Chicago 6, Ind.

Also designed and manufactured in Canada by Magcoa Limited, Toronto, Ontario

▲ For more details circle NED-631 K8 on enclosed inquiry slip ▲

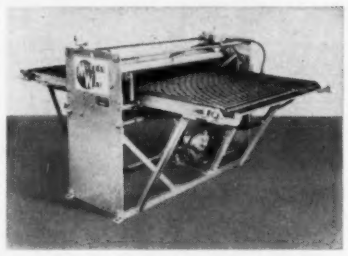
GRINDING WHEEL
uses up to 1¼-in. wide abrasive belt



Expanding type grinding wheel which makes use of abrasive belts up to 1¼ in. wide and 21 in. in circumference maintains a flat edge suitable for polishing, tool grinding, or rough deburring. Wheel has floating action which frees it from edge distortion due to centrifugal force. Neoprene wheel is retained between, but is not bonded to, side flange plates held together by eight pins. Pins are free to move in flange slots, allowing wheel to dynamically balance itself in operation. Belts will not slip under heavy work load. Model 1725 is used at speeds between 1250 and 2250 rpm, whereas Model 3450 operates at 3450 rpm. Both mount on standard motor shafts. Made by **Miller Products Co.**, 1438 12th St., North Chicago, Ill.

▲ For more details circle NED-632 K8 on enclosed inquiry slip ▲

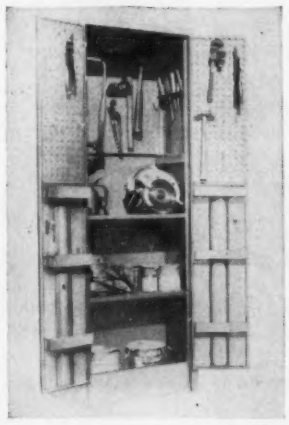
ROLLER COATER
for automated production lines



Uniform application of draw compounds, waxes, sealers, rust inhibitors, paints, and varnishes are but a few of the operations performed by this compact Model C roller coater. Designed for in-line use in automated production, it operates at variable speeds and can be self-powered or synchronized with automated lines. It will coat one or both sides of continuous roll or sheet materials with an accurate film thickness. A rod type sprocket-driven conveyor is optional in any length. Various widths and specifications to suit needs of user are available in this machine. Made by **Murray-Way Corp.**, Dept. N, Box 180, Birmingham, Mich.

▲ For more details circle NED-633 K8 on enclosed inquiry slip ▲

TOOL CABINET
equipped with shelves and racks



Multipurpose No. T-60 tool cabinet has a bin type bottom shelf, built-in tool holders, pegboard racks on inside of doors, and two deep shelves. The welded unit also has three built-in storage bins on each door. The pegboard sections are supplied with hooks for any tool-hanging pattern. A padlock attachment permits locking the doors closed. Cabinet is supplied assembled with a baked-on gray metallic enamel finish. Made by **Inca Metal Products Corp.**, Dept. NED, Box 398, Carrollton, Tex.

▲ For more details circle NED-634 K8 on enclosed inquiry slip ▲

BREATHER-FILTER
protects hydraulic fluid reservoirs

Airborne contamination that could damage pumps or valves is excluded by Model 1990 - A bayonet - type combination filler cap and breather filter for hydraulic fluid, fuel, and oil reservoirs. Retained within the assembly of cadmium-plated stamped steel components is a cleanable Microbon ribbon-type filter element rated at 40 microns. Two filler hole fittings are available which receive the bayonet locking device on the end of the filter. Model 1988 flange mounts on surface of reservoir, whereas Model 1989 mounts on end of filler tube. Threaded filter units can be furnished with ¼, ⅜, ½, and ¾ in. NPT fittings. Made by **Bendix Aviation Corp.**, Bendix Filter Div., 434 W. 12 Mile Rd., Madison Heights, Mich.

▲ For more details circle NED-635 K8 on enclosed inquiry slip ▲

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Bourdon tubes of bronze, drawn or bored s/s, and other alloys

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KUNKLE VALVE CO. • FT. WAYNE, IND.

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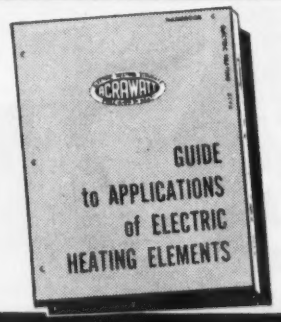

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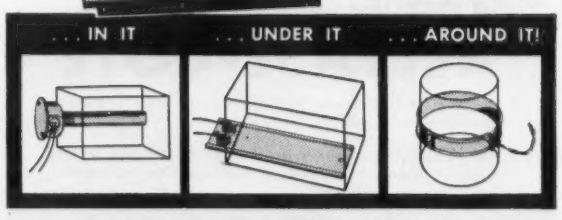

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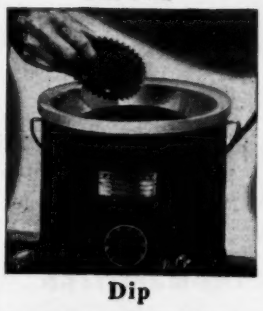
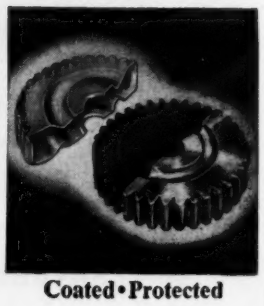
for GEARS • TOOLS • PRECISION PARTS

BEFORE SECONDS AFTER



Dip



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DIP-PAK Protect vital, expensive tools, gears, and machined parts during storage and shipping with Fidelity's durable, transparent plastic coatings. Merely melt coating briquette, dip parts, cool. Lasts indefinitely. Tough; abrasive, moisture, rust resistant. To remove, slit, peel. Re-melt, re-use coating. Economical, practical, rapid. Protect parts; save money.

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Fidelity Chemical Products Corp.
479 Frelinghuysen Avenue, Newark 5, N. J.

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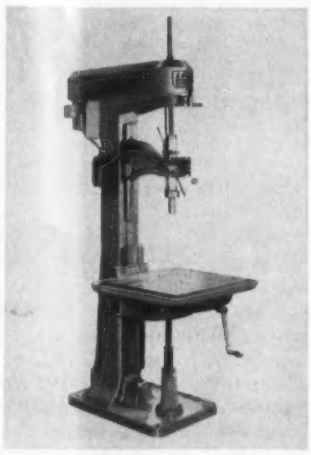
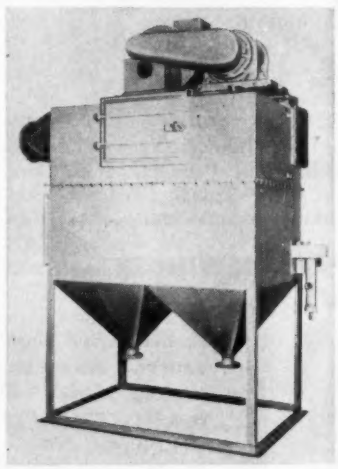
DRILLING MACHINE
has 1-in. capacity in cast iron



Wide speed range, power feed, back-gearing, hand tapping, and a coolant system are features of the Lennox-Demco sensitive drilling machine, available in 1, 2, 3, 4, and 6-spindle units. The multispline spindle exerts a constant upward pressure to eliminate vertical lost motion and prevent the spindle from dropping of its own weight after drilling. Spindle automatically compensates for wear. Side motion is also eliminated. Machine has 1-in. capacity in cast iron and ⅝ in. in mild steel. Specifications include a 12-in. center distance, 7-in. spindle travel and 17-in. table travel. Made by **Lennox Industries, Inc.**, Lennox Tool & Machine Builders Div., Dept. S, Lima, Ohio.

For more details circle NED-642 K8 on enclosed inquiry slip

DUST CONTROL UNIT
precipitator scrubber type offered in 15 sizes from 500 to 40,000 cfm



Efficiency of the improved Type A2 Hydro Precipitator Scrubber dust control unit is bettered by the incorporation of diffuser elements which hold dust particles longer in the turbulent scrubbing zone. Noncondensible and normal dust type materials below 5 microns in size are trapped for removal in a five-stage cleaning process. Sludge can be removed constantly or intermittently by manual, hydraulic, or mechanical means.

Water vapor is removed from the cleaned air which is discharged into the atmosphere. Recirculation of water affords economy in the unit which can be used indoors or outdoors. Constant flushing of the interior prevents any build-up of solids. This improved version of the Type A unit is offered in 15 sizes with capacities ranging from 500 to 40,000 cfm. Made by **Johnson-March Corp.**, Dept. NED, 1724 Chestnut St., Philadelphia 3, Pa.

For more details circle NED-643 K8 on enclosed inquiry slip

Fast High-Pressure Service!
ALEMITE PORTABLE
POWER GUN
FOR ANY PLANT LUBRICATION JOB

- Saves time—easier to handle! Rolls anywhere—indoors or outdoors—even up or down stairs with pivot-swing dolly.
- High-power air-operated pump delivers 14½ oz. of gun grease per minute at 70° F.
- Holds 25-, 35-, or 50-lb. pail—or 70 lbs. of grease.
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Symbol of SW Excellence
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LOOK... If you LOOK for Top Value in Disc Equipped Bronze Valves

THE FIRST renewable composition disc valve was a Jenkins Valve, originated nearly a century ago. Compare today's Fig. 106-A Bronze Globe with any other. See why so many valve users agree that a *Jenkins* is still the first for top value.

Among the dozens of superiorities of the Fig. 106-A are: **One-piece screw-over bonnet** with bevel joint between body and bonnet that acts as an internal brace against the crushing effect of bonnet. **Curved diaphragm** to protect seat from distortion. **Higher, wider raised seat** that permits more reseating operations and lengthens disc life. **Heavier spindle** with more threads. **Slip-on, stay-on** disc holder. **Body** with extra thick walls.

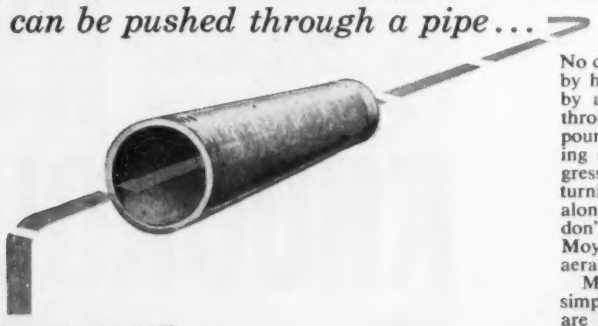
WRITE for folder No. 189-B that describes all of the money-saving features of Fig. 106-A and its companion Angle and Check valves. Jenkins Bros., 100 Park Ave., New York 17.

SOLD THROUGH LEADING DISTRIBUTORS EVERYWHERE

JENKINS VALVES
LOOK FOR THE JENKINS DIAMOND

For more details circle NED-645 K8 on enclosed inquiry slip

if it can be pushed through a pipe...



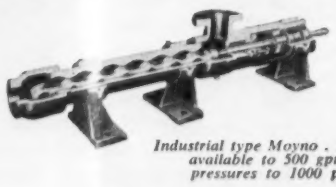
you can pump it with a

MOYNO®

No doubt, in your plant, certain materials are being moved by hand expensively that could be pumped economically by a Moyno. They pump anything that can be forced through a pipe . . . from very thin liquids to heavy, non-pourable abrasive substances . . . even materials containing suspended particles! As the illustration shows, progressing cavities, formed by the helical screw-like rotor turning inside the double-helical stator, move smoothly along, carrying the material with them . . . the cavities don't squeeze the substance . . . can't stick or gum up. Moyno pumps will not cause churning, foaming . . . won't aerate or vapor-lock!

Moynos are adaptable for a wide range of substances simply by modifying the materials the pumping elements are made of. They are available to pull up to 29" of vacuum while discharging under pressure. If you have a pumping problem, chances are a Moyno will solve it!

Look in the yellow pages for the name of your nearest R & M Moyno Pump representative, or write today, for Bulletin 30-NE.



Industrial type Moyno . . . available to 500 gpm, pressures to 1000 psi

ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO / BRANTFORD, ONTARIO

Motors Fans Hoists Moyno Pumps Propeller Products Fans

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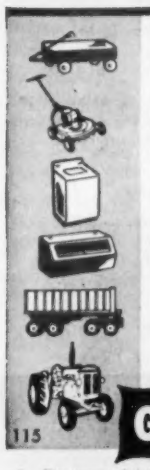
SPECIFY GRIPCO LOCK NUTS



Simple one piece design—no inserts—no separate locking devices. Nothing complicated—the Gripco locking action is within the nut itself, yet you get low initial cost and low application cost with increased customer satisfaction. Speed production and lower manufacturing costs on your products now.

Send for samples and NEW CATALOG today.

Gripco Products Include:

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all with or without the famous Gripco positive locking feature. Also Standard-Semi-Finish Nuts.

Large inventories of all products carried for immediate shipment

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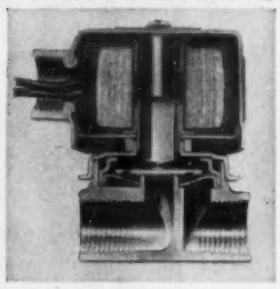

JE

INDUSTRIAL SOLENOID VALVES

Uniquely suitable for industrial flow control of water, air, low pressure steam, light oils, brines, industrial and L.P. gases, etc.

These remarkable new valves have been successfully used to control air and fluid flow in connection with such varied products as

COMMERCIAL GARBAGE DISPOSALS, DISHWASHERS, AUTOMATIC LAWN SPRINKLERS, SPRAY PONDS, WATER SOFTENERS, AIR COMPRESSORS, HOT WATER HEATING SYSTEMS, SPRAY LUBRICATION SYSTEMS, PNEUMATIC TOOLS, etc.

5/16" to 1½" Port Sizes ¼" to 1½" N.P.T. Connections.

To see how "J-E" industrial solenoid valves can solve your flow problems—write for bulletin J-57.

JACKES-EVANS MANUFACTURING CO.
4427 Geraldine Ave. St. Louis 15, Mo.

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RETAINING RING KIT

Replace most retaining rings . . . quickly, easily from this Kit!

*376 Cadmium Plated Truarc Rings *Shaft sizes from ¼" to 2½"
*Three Most Used Truarc Series of External, Internal, Universal Crescent

Sizes and designs in the kit represent 70% of the retaining ring sizes now in industrial, automotive, aircraft and marine applications. All rings meet National Aircraft Standard, NAS 669 and NAS 670. Complete interchange information is supplied with each kit. Rings, if purchased separately, $46.00 — Complete Kit only $34.50.

BEARINGS, INC.
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DIXIE BEARINGS, INC.
276 Memorial Drive, S. W. Atlanta, Georgia

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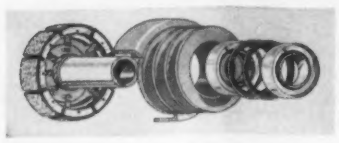
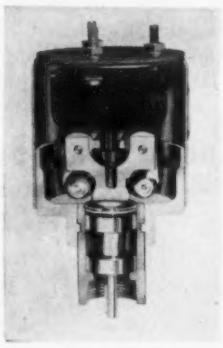
MECHANICAL CLUTCHES for engines and electric motors



Two mechanically operated clutches for gasoline engines and electric motors provide smooth pick-up and positive, no-slip power transmission. They protect engine or motor from overload by releasing at a predetermined speed. Both have antifriction bearings, standard 1 7/16-in. bore, and 5½ in. by 3AB pulley assembly. No. 6510W is for gas engines up to 15 hp and electric motors to 10 hp, while No. 909W is for up to 25 hp gas engines and 20 hp electric motors. Made by **Automatic Steel Products, Inc.**, Mercury Clutch Div., 1270 Camden Ave. S.W., Canton 6, Ohio.

▲ For more details circle NED-652 K8 on enclosed inquiry slip ▲

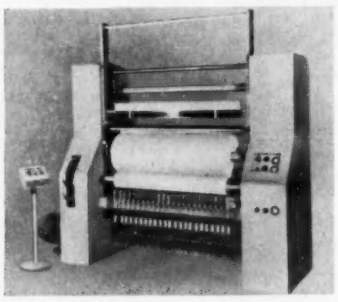
UNDERSPEED GOVERNOR provides overload protection



Adjusting this underspeed governor to trip slightly below normal running speed provides overload protection. Actually a speed-sensitive switch, it operates on the governor flyweight principle. Snap-acting contacts open or close a circuit with an increase or decrease in speed. External circuitry will stop the equipment when speed drops or will operate a warning device. Unit can be preset to operate at any speed between 250 and 5000 rpm. Governor shown is for direct mounting on a standard SAE tachometer drive. Made by **Synchro-Start Products, Inc.**, Dept. 2N, 8151 N. Ridgeway Ave., Skokie, Ill.

▲ For more details circle NED-653 K8 on enclosed inquiry slip ▲

SLITTER & SURFACE REWINDER slits at speed up to 2000 fpm



Available for shear and/or score cut slitting, Model 840 two-drum slitter and surface rewinder with top riding roll will slit at speeds up to 2000 fpm, depending upon width of cut and material. Machine is designed for easy threading and quick knife setups, and for rewinding with or without cores. It can be supplied with Model 702 templet manifold for 2-min change-over of slit widths on score-cut slitting. Minimum slit width is ½ in. with single knife setup. Machine widths range through 82 in. Rewind diameters range from ⅞ to 32 or 36 in. Made by **John Dusenbery Co.**, 284 Grove Ave., Verona, N. J.

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9-IN. RADIAL SAW motor develops 2 hp under load

Sufficient capacity for general woodworking operations, including making of shipping crates and pallets, and maintenance work, is provided by the Super 900 9-in. radial saw. It can also be used for cutting metal sheeting, tubing, and extrusions. The 1 hp motor actually develops up to 2 hp under load. Saw has up-front control for adjusting the table fence, double over-arm construction, and warp-free edge grain fir table. The saw can be quickly converted for dadoing, molding, tenoning, drilling, shaping, grinding, and sanding. Cross-cut capacity is 15 in., maximum depth of cut is 2½ in., and dado capacity is 13/16 in. wide with a 6-in. dado. Saw will rip to the center of a 48-in. panel. Made by **Rockwell Mfg. Co.**, Delta Power Tool Div., 491 N. Lexington Ave., Pittsburgh 8, Pa.

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COLSON LIFT JACK SYSTEMS

Contact your local representative or distributor or write to:
The Colson Corporation
JONESBORO, ARKANSAS

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NEW *Taylor* LOW COST TEMPERATURE TRANSMITTER

The new Taylor SENSAIRE* Pneumatic Transmitter provides low cost temperature measurement within limits of minus 30°F. to plus 1200°F. with simplified adjustments, excellent repeatability and unusually fast response. Available in range spans of 50°F., 100°F., 200°F., and 400°F.

Sturdy, compact, force-balance, with mercury-filled thermal system, the SENSAIRE Transmitter is temperature compensated. Factory calibrated accuracy is well within 1% of rated range below 550°F.; 1½% above 550°F.

Write for SENSAIRE **Bulletin 98293.** Taylor Instrument Companies, Rochester, N.Y., or Toronto, Ont.

*Trade-Mark

Taylor Instruments MEAN ACCURACY FIRST

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THE *Original* 4 POINT PUNCH NYE KNOCKOUT PUNCH

Each punch ½" to 4" has the ORIGINAL 4-POINT cutting feature which takes the toil out of the job. Cuts clean, quick knockouts speedily, smoothly and burrless. Ball bearing chuck prevents friction. Hand or hydraulic.

Try a NYE and know the best. Order today.

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NYE TOOL COMPANY
4126 WEST FULLERTON AVE., CHICAGO 39, ILLINOIS

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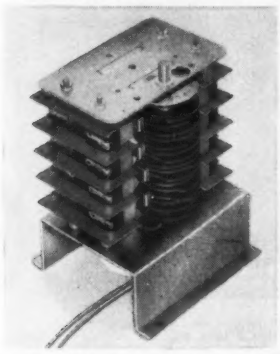
NEW field-adjustable timers permit easy setting of all switching times for 1 to 8 independent circuits



The new Cramer Type 511 and Type 521 Cycling Timers combine high accuracy with quick adjustability of up to 8 independent timed intervals. Both throws of each SPDT load switch are controlled by separate cams, independently adjustable through 180° with a small wrench supplied. Cam setting is indicated on a dial in percent of full cycle time, permitting accurate setting of "make" and "break" times for each switch. Type 511 provides from 1 to 3 load switches, Type 521 from 4 to 8. Cycle times available are from 6 seconds to 48 hours. Switching accuracy is within 1½° for any one circuit, 3° between any two circuits. Load switches are rated for 20 amperes at 125 or 250 volts AC, the motor for 115/230 volts, 25, 50 and 60 cycles. For complete information, write Cramer Controls Corporation, Box 28, Centerbrook, Connecticut. *Advt.*

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FREE LAYOUT SERVICE

...assures better storage facilities for less money

Take advantage of Equipto's Free Layout Service to obtain valuable advice on the number and type of storage units to buy . . . complete floor plans and elevation drawings showing best way to arrange units within your allotted storage area. You will thus be able to make maximum use of your floor space, save steps, speed customer service, and simplify inventory and stock control.

If you would rather lay out your own facilities, send for fact-crammed, fully illustrated booklet, "How to Solve Your Storage Problems."

Both "assists" are further evidence of Equipto's primary concern with providing super-efficient storage facilities—not in merely selling equipment.

Equipto Division of Aurora Equipment Co.

690 Prairie Avenue, Aurora, Illinois

Steel Shelving - Slotted Angle - Bins - Drawer Units - Lockers - Benches

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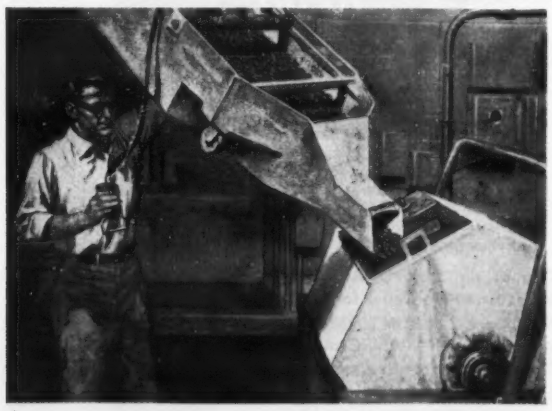

The "Touch of Gold" is going into this barrel

. . . because the operator is adding Norton TUMBLEX* abrasive, widely recognized as an unequalled contribution to better, lower cost finishing. For example, after shifting from hand finishing to barrel finishing with ALUNDUM* TUMBLEX "T" abrasive, a leading aircraft parts manufacturer reports yearly savings of over $90,000. Send sample parts to our Sample Processing Department. We'll return finely finished samples, and report the best abrasives and methods. NORTON COMPANY, General Offices, Worcester 6, Massachusetts.

NORTON ABRASIVES

Making better products...to make your products better

G-353 *Trade-Marks Reg. U. S. Pat. Off. and Foreign Countries

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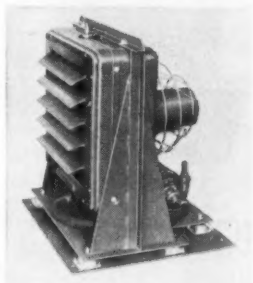
WIRE MESH PARTITIONS for making store rooms, tool cribs

Ceiling-high separation of store rooms, tool cribs, production offices and similar areas can be achieved with these wire mesh partitions without shutting off air and light. Using screwdrivers and wrenches, a small maintenance crew can complete an average tool crib in less than a day. Damaged panels are easily replaced, and no alterations to building are necessary. Components include plain walls in various widths, swinging and sliding doors, and windows, as well as special shaped panels. Made by **Phoenix Wire Works**, Dept. D, 1958 E. Kirby, Detroit 11, Mich.

▲ For more details circle **NED-662 K8** on enclosed inquiry slip ▲

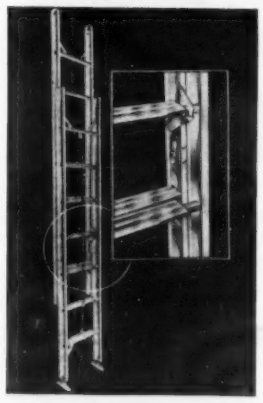
FLUID COOLERS cool water-cooled electronic tubes



Used to cool water-cooled electronic tubes, these fluid coolers consist of water type copper coil, motor-driven fan, and motor-driven pump. Model 89B155 shown is typical of the line. It will extract 13,500 Btu per hr from water having a minimum flow of 5 gpm with maximum water leaving temperature of 150° F and maximum ambient air temperature of 113° F. This model measures 32 x 27 x 24 in. Coil and fan combination is supported by shock mounts as are the pump and motor. Fittings in contact with water are copper or bronze. Made by **American-Standard**, American Blower Div., Dept. N54, 8111 Tireman Ave., Detroit 32, Mich.

▲ For more details circle **NED-663 K8** on enclosed inquiry slip ▲

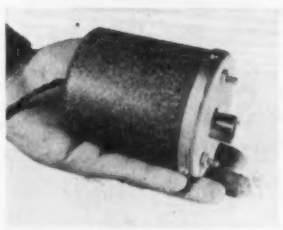
MAGNESIUM EXTENSION LADDER provides 2½ in. wide steps



Maximum comfort for workers standing for long periods of time is provided by this Superlight magnesium extension ladder which features 2½-in. wide steps. These step-rungs, reeded for nonskid footing, are welded to the I-beam channel side rails. Ladder can be handled easily by one man, is shockproof, nonsmudging, and will not corrode. Sections interlock for safety and sliding ease. Units are available up to 40 ft in length and are equipped with rope, pulley, and special locks. Made by **White Metal Rolling & Stamping Corp.**, 443 Fourth Ave., New York 16, N. Y.

▲ For more details circle **NED-664 K8** on enclosed inquiry slip ▲

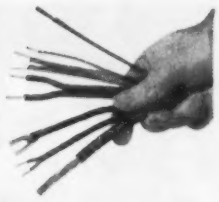
SHAFT MOUNT GEAR MOTOR in 80:1 to 1600:1 reduction ratios



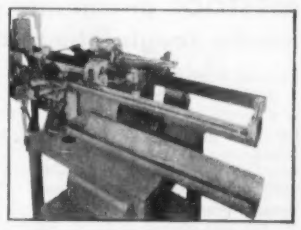
Hollow output shaft of the SM-5 Shaftrol control gear motor mounts directly on driven shaft to replace handwheels, cranks, or levers. Offered with or without built-in potentiometer, motor is available with two to four stage gear reductions ranging from 80:1 to 1600:1. Continuous duty torque rating is 75 lb-in. Combined with the Dialtrol positioner, motor provides accurate remote control. Used with the Jordan 5.5 or comparable amplifier, it positions in proportion to 0.5 to 5 ma signal, a 3-15 psi air signal, or the output from any electrical transducer. Single-phase 110 v is standard, but 2 and 3-phase, and DC Shaftrols are available. Larger units deliver up to 800 lb-in. torque. Made by **Jordan Co.**, Dept. NED, 3235 W. Hampton Ave., Milwaukee 9, Wis.

▲ For more details circle **NED-665 K8** on enclosed inquiry slip ▲

ANOTHER TIME AND LABOR SAVER for finishing wire leads with ARTOS AUTOMATIC CS-6



A new collecting device is now available for the popular Artos CS-6 wire-measuring, cutting and stripping machine. Illustration shows the new collecting trough (AE-478). Upper trough collects wire leads up to 60 inches long, then empties them into lower trough after wire has been cut, thus saving operator time.



Production speed of 3000 finished wire leads per hour up to 15 inches long. Maximum cutting length is 194 inches . . . stripping up to 2 inches on one or both ends. Artos also offers machines that measure, cut, strip and attach terminals at one or both ends.

Write for Bulletin on CS-6. Engineering consultation without obligation.

AGENTS THROUGHOUT THE WORLD

ARTOS ENGINEERING CO.

2751 South 28th Street • Milwaukee 46, Wis.

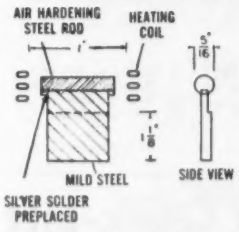
▲ For more details circle **NED-666 K8** on enclosed inquiry slip ▲

The Lepel line of induction heating equipment represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating.

If you are interested in induction heating you are invited to send samples of the work with specifications. Our engineers will process and return the completed job with full data and recommendations without any cost or obligations.

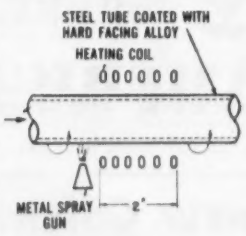
TYPICAL INDUCTION HEATING APPLICATIONS

SIMULTANEOUS HARDENING and BRAZING

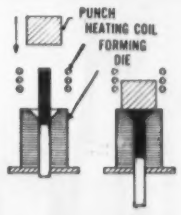


The machined and finished rod of air-hardening steel is simultaneously hardened and brazed to a mild-steel tab. Use of a purified hydrogen atmosphere and a high temperature brazing alloy permits successful hardening of alloy steels without discoloration and scaling even in the absence of flux.

DIFFUSION BONDING OF SPRAYED METAL COATINGS



Corrosion or wear resistant metal coatings sprayed on metal surfaces can be improved by heating to achieve alloying by diffusion. The drawing shows a typical arrangement for processing steel tube sprayed with hard facing alloy. Long tubes may be progressively sprayed and heated.



HEATING HIGH STRENGTH ALLOYS FOR FORMING

Uniform and rapid heating of high strength alloys (alloy steels, titanium, etc.) aids in upsetting and forming operations and also minimizes oxidation and embrittlement.

Electronic Tube Generators from 1 kw to 100 kw.
Spark Gap Converters from 2 kw to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information.

All Lepel equipment is certified to comply with the requirements of the Federal Communications Commission.

LEPEL HIGH FREQUENCY LABORATORIES, INC.

55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

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AIRETOOL pneumatic grinders handle tough jobs in a hurry!

Powerful Airetool production grinders won't stall under heavy loads . . . won't heat up under steady use. Airetool pneumatic motors give plenty of driving power — constant, efficient speed.

Horizontal grinders cut costs on heavy metal removal and finishing operations. Two models, 4" to 8" abrasive wheels. Controlled speeds, 4500 to 9000 rpm. Abrasive belt attachment fine-finishes dies, molds, welds, contours.

Vertical grinders save finishing time and money on flat and curved surfaces. Even balanced design. Handle easily. Two models with 6" cup or wire wheel; 9" sanding disc capacity.

Write for Catalog No. 63

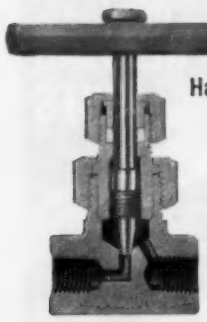
Representatives in principal cities of U.S.A., Canada, Mexico, Puerto Rico, South America, England, Europe, Italy, Japan, Hawaii
European Plant: Vlaardingen, The Netherlands
Canadian Plant: 37 Spalding Drive, Brantford, Ontario

AIRETOOL MANUFACTURING COMPANY SPRINGFIELD, OHIO

▲ For more details circle **NED-668 K8** on enclosed inquiry slip ▲

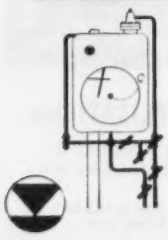
for dependable field service

SPECIFY AMERICAN® NEEDLE VALVES



Handle the toughest meter manifold jobs and corrosive field services. Eliminate gland leaks.

Teflon-packed forged steel American® Needle Valves deliver year 'round dependable service — stand up under all conditions. Stainless or carbon steel precision machined valve bodies are ideally suited for welding. Stainless steel centerless-ground valve stem design makes it simple to repack valves under pressure.



Standard valves are design rated for pressures to 5,000 psi at 70°F. Upon request, assembled valves are hydrostatically tested to 10,000 psi (twice rated working pressure) and individually inspected. Valves are also furnished with graphite-impregnated asbestos packing for temperatures above 450°F.

Angle or straight patterns — screwed or union bonnets.

Ask your American Meter representative for full details.

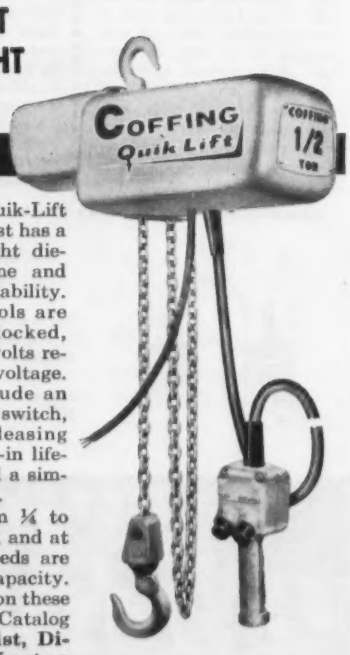
AMERICAN® METER COMPANY INCORPORATED ESTABLISHED 1836

Executive Offices: Philadelphia 16, Pa. Sales offices in principal cities.

▲ For more details circle **NED-669 K8** on enclosed inquiry slip ▲

NEW Coffing Quik-Lift

ELECTRIC HOIST IS LIGHTWEIGHT BUT STURDY

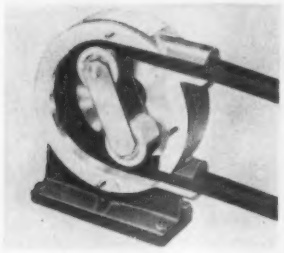


The new Coffing Quik-Lift coil chain electric hoist has a strong but lightweight die-cast aluminum frame and housing for easy portability. Push-button controls are mechanically interlocked, and operate on 115 volts regardless of motor voltage. Other features include an easily-adjusted limit switch, instantaneously releasing V-type brake, sealed-in lifetime lubrication, and a simplified wiring system.

Models range from ¼ to two tons in capacity, and at least two lifting speeds are available in each capacity. For full information on these new hoists, write for Catalog AD-65. **Coffing Hoist, Division of Duff-Norton Company, 803 Walter Street, Danville, Ill.**

▲ For more details circle **NED-670 K8** on enclosed inquiry slip ▲

CORROSIVE-LIQUID PUMP capacity increased to 246 gph



Improved Squee-Gee pumps feature increased capacity to 246 gph. The new Model 610 is threaded from the side to speed tubing change and eliminate drip. Pumps handle corrosive and sterile solutions and abrasive slurries, virtually without maintenance. A single, continuous, flexible tube provides both inlet and outlet for the pump and completely isolates fluid from all moving parts. Solutions are squeezed through the tube by double-end ball-bearing rotor. Made by **Randolph Co.**, Dept. NED, 1018 Rosine St., Houston, Tex.

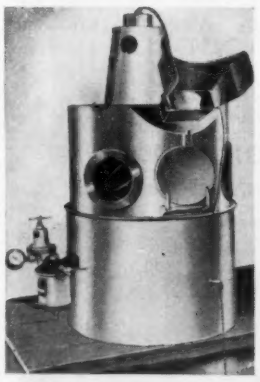
▲ For more details circle **NED-671 K8** on enclosed inquiry slip ▲

TOTE BOX pops open to use, folds for storage

This larger version of the Miracle tote box measures 18 x 16 x 19 in. Automatic folding action allows it to be stored flat when not in use. It pops open for use. With its sturdy telescoping cover, box possesses extraordinary strength, and can be stacked to the ceiling if necessary. Available in the standard, large, and the new extra-large size, boxes are lightweight and reusable. Made by **Paige Co.**, Dept. N, 114 E. 32nd St., New York 16, N. Y.

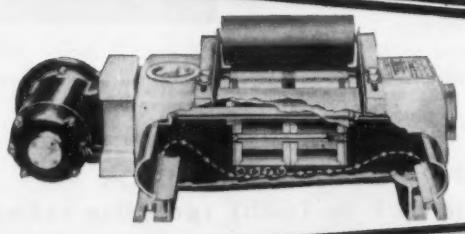
▲ For more details circle **NED-672 K8** on enclosed inquiry slip ▲

WET BLAST HONING MACHINE for carbide cutting tools and drills



All types of tungsten carbide and high speed steel cutting tools and drills can be honed by the Liqui-Breez wet blast honing machine. It has a self-contained bench-type cabinet with working chamber 13 in. high, having an 18-in. diameter. Unit is operated by foot pedal and is equipped with rubber gauntlets. It requires a 5-lb abrasive load and 3 lb of water. Machine fixes a true edge that assures long tool life. Other applications include the finish deburring of small machine parts. Made by **Tobin-Arp Mfg. Co.**, 6402 Penn Ave. S., Minneapolis 23, Minn.

▲ For more details circle **NED-673 K8** on enclosed inquiry slip ▲



NEW CFC MAGNETIC SEPARATOR

Keeps Coolants Free of Ferrous Contaminants

The new low-cost CFC Magnetic Separator continuously and automatically removes ferrous chips and sludge from coolants. It takes less than 2 square feet of floor space — can often be installed between columns. Unit includes totally enclosed gearhead motor. No separate pump is required. Available at prices as low as $325. Write for technical literature to Department NE.

COMMERCIAL FILTERS CORPORATION
Melrose 76, Massachusetts
Plants in Melrose, Mass. and Lebanon, Ind.

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REVCO Sub-Zero Chests

- **for shrink fits**
- **for seasoning gauges and tools**
- **for testing • for research**
- **for processing to −140°**

Model RSZ503 Rivet Cooler (shown) equipped with 90 rivet canisters, temperatures to −30° F. 110V, 60 cycle, single phase.

Model SZH153 with temperatures to −95° F. 110V; 60 cycle, single phase.

Model SZH653, larger capacity, temperatures to −85° F. 110V, 60 cycle, single phase.

Model SZHC657. Same capacity as SZH653 but attains temperature as low as −140° F. 220V, 60 cycle, single phase.

Refrigeration: Model SZHC657 operates with 3 Tecumseh hermetic compressors in a two system cascade. Other Sub-Zeros use 2 hermetics in a two stage system. Rivet Cooler operates with single hermetic unit. All models equipped with efficient fan-cooled condensers — no liquid coolant required. *Write Today for Full Specifications and Prices.*

Description	Model	Cu.Ft.	Temp. Range		Outside Dim.			Inside Dim.		
			Rm. 70°	Rm. 110°	L	W	H	L	W	H
Sub-Zero	SZH153	1.5	−95° F.	−85° F.	42"	28"	42¾"	23"	9"	12½"
Sub-Zero	SZH653	6.5	−85° F.	−75° F.	60"	28"	42¾"	47"	15"	16"
Sub-Zero	SZHC657	6.5	−140° F.	−125° F.	60"	28"	42¾"	47"	15"	16"
Rivet Cooler	RSZ503	5.0	−30° F.	−20° F.	42"	28"	41"	30"	16"	18"

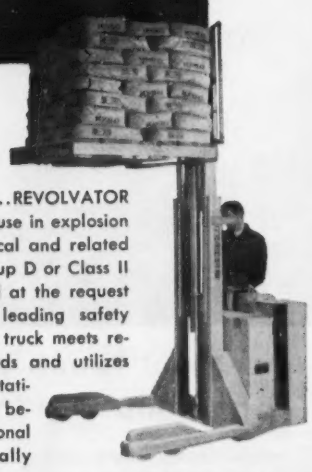
REVCO, Inc.
Setting Trends in Refrigeration since 1938 **Deerfield, Michigan**

▲ For more details circle **NED-675 K8** on enclosed inquiry slip ▲

Because this has what it takes...

The rugged durability and extra value (Timken tapered roller bearings in every wheel, spring loaded non-kicking handle, slide planes for easy pallet entry and 360° lifting radius as standard) of the REVOLVATOR Red Giant hand lift pallet truck has built a reputation which means that . . .

We were called on to do this...



One of six basic models... REVOLVATOR Series 54.90 Go-Getter for use in explosion hazardous areas for chemical and related companies with Class I Group D or Class II Group G hazards designed at the request of one of the country's leading safety authorities. This electric lift truck meets requirements for both hazards and utilizes screw type housings hydrostatically tested to pressures far beyond those required. Additional safety feature — hydraulically operated disc brake.

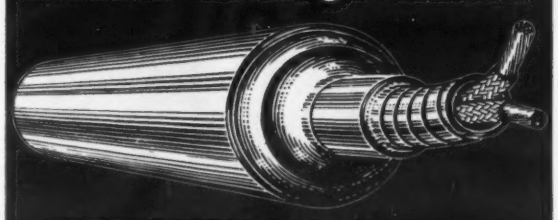
Explosion-proof High-lift Go-Getter

Therefore: **Whether you need a standard piece of material handling equipment or specially designed equipment, call on**

REVOLVATOR CO.
8732 TONNELE AVENUE, NORTH BERGEN, N. J.

▲ For more details circle **NED-676 K8** on enclosed inquiry slip ▲

CHROMALOX
electric cartridge heaters



POSITIVE LEAD WIRE PROTECTION FOR STANDARD AND HI-WATTAGE MODELS

New special features help Chromalox electric Cartridge Heaters provide longer life and more dependable spot heat. Use where abrasion or steam, oils or moisture limit heater life.

New high strength spring guard protects against stress and vibration. Moisture-resistant flexible brass conduit provides rugged, vapor-tight, drip-proof cover for lead wires.

Get the full story today. Write for Cartridge Heater Bulletin 850. See other ad on page 4

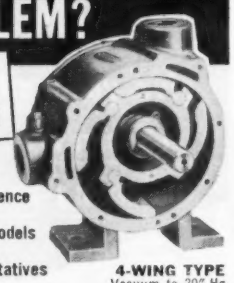
2641

Edwin L. Wiegand Company
7509 Thomas Boulevard • Pittsburgh 8, Pa.

For more details circle NED-677 K8 on enclosed inquiry slip

VACUUM PROBLEM?

LEIMAN HAS THE ANSWER!

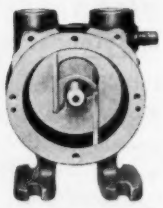


- Over 70 years' experience
- Many types, sizes, models
- Engineering representatives in all industrial centers

4-WING TYPE
Vacuum to 20" Hg.
Pressure to 15 psig.
Volume to 162 cfm.

Get Leiman "Lifetime" Construction

Leiman Vacuum Pumps operate 10, 15 and 20 years without trouble or maintenance because they take up their own wear. Fewer moving parts—made of durable cast iron and steel (no composition)—provide higher vacuum and volume, with smaller pump and motor. Run quietly. Every pump tested before shipment. Consult us on your needs. WRITE for 16-page Catalog and 24-page Application Book.



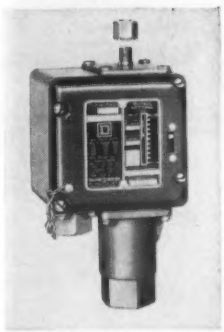
2-WING TYPE
Vacuum to 29.9" Hg
Pressure to 20 psig.
Volume to 40.8 cfm.

Leiman Bros., Inc.
167 Christie St., Newark 5, N. J.
Established 1887

LEIMAN Rotary Air and VACUUM PUMPS

For more details circle NED-678 K8 on enclosed inquiry slip

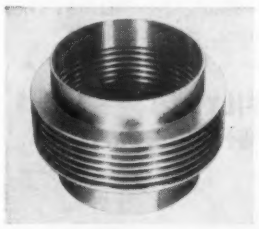
PRESSURE SWITCH
adjustable from 550 to 5000 psi



A strain relief mechanism to prevent damage from the shock of violent pressure surges is incorporated in this pressure switch for high-pressure hydraulic systems. It is adjustable through a 550 to 5000-psi range, and operates at rates up to 300 cycles per min. Construction is oiltight. Made by **Square D Co.**, 4045 N. Richards St., Milwaukee 12, Wis.

For more details circle NED-680 K8 on enclosed inquiry slip

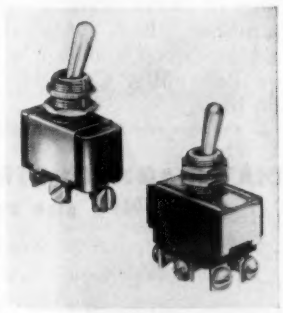
LIGHTWEIGHT BELLOWS
in 1/4-in. to 60-in. sizes



Drawing or forming operations are not employed in making these aluminum alloy bellows. Advantages include controlled wall thickness to concentrate strength where stress is the greatest. Some aluminum units test to 100 million cycles without fatigue. Units have low force requirements for axial or angular flexing. Sizes range from 1/4 in. to over 60-in. diameter, with pressure ratings to over 3000 psi. Where high temperatures are involved, bellows of Inconel-X, A-286, and other high temperature alloys can be furnished. Made by **Hydrodyne Corp.**, 7352 N. Coldwater Canyon Ave., North Hollywood, Calif.

For more details circle NED-681 K8 on enclosed inquiry slip

LEVER-ACTION SWITCHES
wide variety of types offered



Single-pole single-throw, single-pole double-throw, double-pole single-throw, and double-pole double-throw models, and over 100 types of three-position circuitry, including momentary action, are available in the 4000 Series of switches for electronic and aircraft use. They have silver contacts and fast-pivoted lever action for continuous duty. Commercial and government specification models are offered with solder, screw, or spade quick-disconnect terminals. Models with maintained contacts are rated at 15 amp, 125/250 v ac; 1/2 hp, 125 v ac; 1 hp, 250 v ac. All are UL-approved. Made by **Sargent Electric Corp.**, Dept. NED, 630 Merrick Rd., Lynbrook, N. Y.

For more details circle NED-682 K8 on enclosed inquiry slip

How to select
WORM GEAR Drives
FREE TO DESIGN ENGINEERS

NEW Bulletin 218

Complete up-to-date information on Cone-Drive double-enveloping worm gear drives. Provides all specification data plus "how to select and order".

CONE-DRIVE GEARS
DIVISION MICHIGAN TOOL COMPANY
7171 E. McNichols Rd. • Detroit 12, Michigan

For more details circle NED-683 K8 on enclosed inquiry slip

a good team for steam

This Yarway team has scored high—over a million installed on all types of steam equipment. Stocked and sold by 270 Industrial Distributors. For free Steam Trap Book, write YARNALL-WARING CO., 131 Mermaid Ave., Philadelphia 18, Pa.

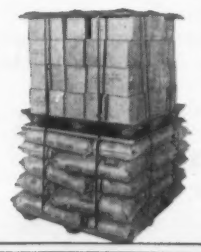
go YARWAY with confidence

For more details circle NED-684 K8 on enclosed inquiry slip

The ideal shipping container is . . .

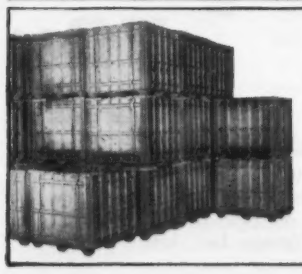
easy to assemble . . .

"One man with a hammer" quickly assembles the Band-Box. Clip fasteners attach easily, securely hold sides and Stack-Lock Corners.



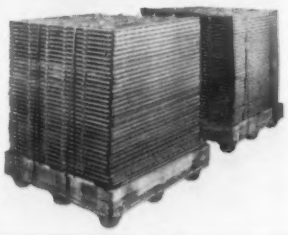
self-palletizing . . .

Every Band-Box bottom is its own pallet. Can be stacked ceiling-high without toppling. Use alone or assembled as a full Band-Box. 4-way entry with hand or power lift-truck.



perfect for storage . . .

The all-steel Band-Box is available with Stack-Lock Corners or full cover for storage protection. It's painted, chemically treated and enameled.



nestable and reusable . . .

Nested, 17 space-saving Band-Boxes take up the same cubic area as one assembled unit. And they can be used over and over again.

Get all these features in the Ackermann BAND-BOX
PATENT APPLIED FOR

Look at these features in terms of savings. See how *economical* the Ackermann Band-Box is. Your shipping department can save money up and down the line. Get full cost-cutting details on the Band-Box—perfect answer to inter-plant and intra-plant shipping and storage problems. Write, wire or call Ackermann Manufacturing Company (Subsidiary of Wheeling Steel Corporation), Wheeling, West Virginia.

IT'S WHEELING STEEL

For more details circle NED-679 K8 on enclosed inquiry slip

Hobbs HOUR METERS for

MEASUREMENT OF USE

PROTECTIVE MAINTENANCE

Operating Time of Production and Service Equipment — AT A GLANCE!

To obtain maximum use of production and service equipment, it is essential to know the hours of operation. This information permits accurate study of utilization, also provides data needed for protective maintenance which improves performance and lengthens service through regular attention at the right time.

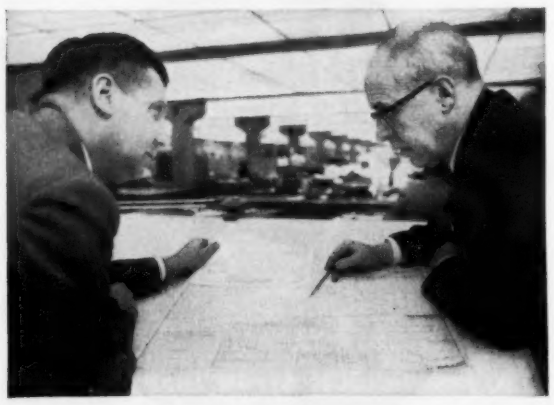
Hobbs Hour Meters indicate to the HOUR and MINUTE the time of equipment operation. Not a revolution counter, but a true timing instrument. ALTERNATING CURRENT meters time the operation of any equipment powered by a-c electricity; DIRECT CURRENT meters, the operation of any equipment powered by internal combustion engine or battery.

● Distributors in Principal Cities
WRITE FOR CATALOG 600

JOHN W. Hobbs CORPORATION — A DIVISION OF STEWART WARNER
2055 YALE BLVD. SPRINGFIELD, ILLINOIS

▲ For more details circle NED-685 K8 on enclosed inquiry slip ▲

thanks to **automatic xerography**



Preston Ball, left, chief of Martin reproduction department, and Parker Daggett, management engineer, compare with an original drawing the superb quality of a reduced-size copy run off from an offset paper master prepared by xerography. Original drawing was first microfilmed, then "blown back" by XeroX® Copyflo® 11 continuous printer onto a paper master for runoff on a duplicator.

MARTIN BALTIMORE

saves $85,000 yearly

A XeroX® Copyflo® 11 continuous printer, enlarging disposable microfilm onto a continuous roll of offset paper masters, is saving Martin of Baltimore $85,000 a year in the reproduction of engineering drawings and drawing-change notices.

The Copyflo continuous printer, operating on the electrostatic principles of xerography, is completely automatic, enlarging microfilmed engineering drawings and change notices onto a continuous roll of inexpensive, offset-paper-master stock. This roll, 2,000 feet long by 12 inches wide, is then cut apart into individual masters for the runoff of multiple copies on offset duplicators.

Here are some of the advantages of the Copyflo 11 continuous printer to Martin of Baltimore:

- Annual savings of $85,000.
- Output of offset paper masters has doubled, with 50% reduction of personnel and duplicating equipment.
- Average of 20 minutes saved in engineering department on each of 50,000 yearly change notices.
- Improved quality of runoff copies.
- Specification books, training manuals, etc., now printed in half of former time, with half the paper and half the collating.

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HALOID XEROX®

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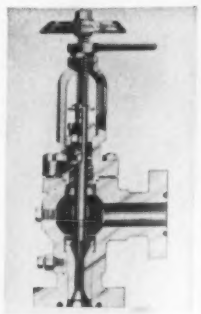
THROTTLING VALVE
for accurate fluid or gas control



Suited for general industrial and processing applications, this high pressure throttling valve is available in 1 to 6-in. sizes for pressures to 10,000 psi. Usable for fluid or gas control, it has outside threads which provide corrosion resistance. The stem can be locked at any setting, and pointer and calibration plate indicate the orifice opening. Tapered throat gives a venturi effect with excellent flow characteristics. It is available in ASA or API flanged or threaded connections in carbon steel, stainless steel, bronze, or aluminum constructions. Conical, micro, thermo, and extra-hard tips are available for varying service conditions, as are fixed diameter chokes. Automatic hydraulic or air actuation is optional. Made by **Shaffer Tool Works**, Dept. G., 209 S. Pomona, Brea, Calif.

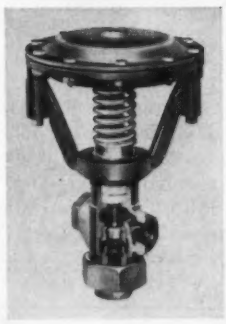
▲ For more details circle NED-687 K8 on enclosed inquiry slip ▲

PLATING SOLUTION FILTER
in-tank unit rated at 300 gpm

Hanging on the tank wall in the plating solution, this in-the-tank filter assembly comprises the filter unit, motor driven pump, and discharge hose. The 300-gpm pump draws the acid or alkaline plating solution through the filter unit and returns the clarified solution to the plating tank. As many filter units may be used as required to provide the needed capacity. They are easily moved from tank to tank. Standard paper filter bag is removed and replaced when necessary. Bags of Dynel, Vinyon, nylon, or cotton twill can be furnished. Both types can be precoated with filter aid or carbon and can be washed for reuse. Made by **Belke Mfg. Co.**, 944L N. Cicero Ave., Chicago 51, Ill.

▲ For more details circle NED-688 K8 on enclosed inquiry slip ▲

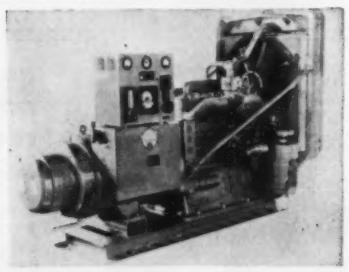
DIAPHRAGM CONTROL VALVE
½-in. NPT size rated 350 psi



Available in three-way or reverse-acting types, this diaphragm-operated ½-in. NPT, 350-psi, control valve is designed for fast response in hot or cold raw water, steam, air, or gas service. Offered with bronze or ductile iron bodies, they have one-piece hardened stainless stems with integral seats and hardened skirted seat rings. Optional sizes of ½-in. NPT inlet, cylinder, and drain ports, or ½-in. inlet with ¾-in. cylinder and drain ports are available. Top diaphragm, actuated by 20 to 35 psi air, can be operated manually, or by pneumatic or electro-pneumatic cycle control device. Made by **Sinclair-Collins Valve Co.**, Dept. NED, 454 Morgan Ave., Akron 11, Ohio.

▲ For more details circle NED-689 K8 on enclosed inquiry slip ▲

ELECTRIC GENERATING SET
rated 125 kw, 156 kva, 1800 rpm



Gasoline engine-powered electric generating set for standby emergency service, or seasonal continuous duty is rated 125 kw, 156 kva, 1800 rpm. Unit has revolving field-type external regulated generator of single-bearing design, complete with ammortisseur windings and direct connected exciter. It is fastened on a common steel bed plate and driven through a semi-flexible coupling by a Hercules Model HXE 6-cylinder, 4-cycle gasoline engine with 935 cu in. displacement. Unit is available in both single and three-phase types. Portable, diesel, natural gas, and propane models are obtainable. Made by **Katolight Corp.**, Box 891-76, Mankato, Minn.

▲ For more details circle NED-690 K8 on enclosed inquiry slip ▲

perfect sealer *for every joint!*

SHOCK RESISTANT ADHESIVE

quickly forms tight seal on porous materials.

●

For threaded and flanged connections.

●

Withstands heat up to 350°F.

●

Impervious to oil, gasoline, kerosene, water, steam and glycol.

Comes in handy 2 oz. or 6 oz. tube, quarts and gallons.

●

Write for sample
SAMUEL CABOT INC., 1032 Oliver Bldg., Boston 9, Mass.

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P-K hardened Screwnails

give you nail driving speed plus screw holding power

Fasten sheet metal to wood...wood to wood in seconds!

For the finest fasteners made, insist on Parker-Kalon...the name you can trust. Get samples from leading distributors who stock P-K Screwnails . . . or write:

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PARKER-KALON® fasteners
Parker-Kalon Division • General American Transportation Corporation • Clifton, New Jersey

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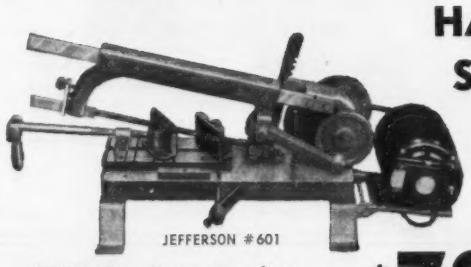
A Rugged 4" x 4" POWER HACK SAW



JEFFERSON #601

for ONLY **$79.00**

JEFFERSON #601 complete with motor and switch, wired, ready to go.

F.O.B. Eau Claire, Wis.

This compact bench model has fast acting, 45° swivel vise and pressure relief on back stroke. Heavier guide bars and guide bar support arms allow more pressure on saw blade for faster cutting. Has length gauge bar, latch to hold up frame, Oilite bearings throughout.

Other models in wet cut or dry cut, capacities to 10½" x 9". Ask your KELLER Saw Dealer or write for Bulletin No. 257.

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2365 UNIVERSITY AVENUE • ST. PAUL 14A, MINNESOTA

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"We've reduced our scrubbing time from 70 to 7 man-hours ... and our floors have never before been so clean!"

— Says Foreman of BURNY BROS. BAKERY, CHICAGO

Burny Bros. garage and stockroom floors get daily scrubbing with a *Job-Fitted Combination Scrubber-Vac* and *Setol Cleanser. They're an unbeatable team* to speed the cleaning of oily, greasy floors. *Here's why:* A *Scrubber-Vac* applies the cleanser, scrubs, flushes, and picks up (damp-dries the floor)—*all in one operation! Job-fitted* to specific needs, the machine provides maximum brush coverage. Its teammate, *Setol Cleanser*, emulsifies grimy oil and grease *instantaneously* for fast, thorough removal by the machine's powerful vac. The *Scrubber-Vac* shown above, *Finnell's 213P*, cleans up to 8,750 sq. ft. per hour (and more in some cases), depending upon floor condition and congestion. For demonstration, consultation, or literature, phone or write nearest *Finnell Branch* or Finnell System, Inc., 5510 East St., Elkhart, Ind.

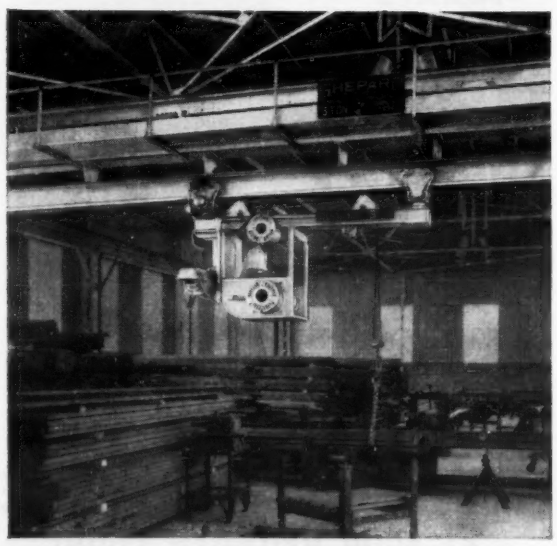
FINNELL SYSTEM, INC. Originators of Power Scrubbing and Polishing Machines — FINNELL — BRANCHES IN ALL PRINCIPAL CITIES

▲ For more details circle NED-694 K8 on enclosed inquiry slip ▲

SHEPARD NILES MONORAIL HOIST

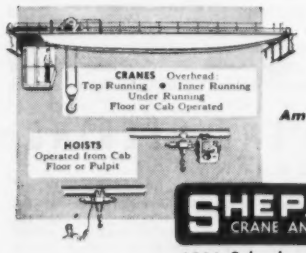
MORE ROOM

... for production and storage



Why move materials around men, materials and machines? Use the direct route—smoothly and safely—through air. Shepard Niles Monorail Hoists and Transfer Cranes put load handling overhead . . . eliminate costly ground level handling. Use the space saved for production and storage.

Rugged Shepard Niles hoists are available for constant or intermittent service. Choose from light, medium or heavy duty hoists equipped with cab or floor controls. Offered in fast, medium or slow speeds. Send for Monorail Hoist bulletin today . . . or ask that a Shepard Niles representative call — there's NO OBLIGATION.



Building America's Most Complete Line of Cranes and Hoists Since 1903

SHEPARD NILES CRANE AND HOIST CORPORATION
1801 Schuyler Ave., Montour Falls, N.Y.

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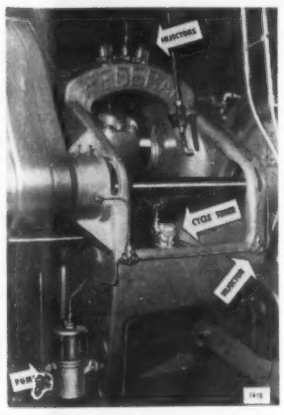
POWER LUBRICATING UNIT oils all bearings on machine



Air operated and controlled electrically, mechanically, or manually, this automated Ram-Pump provides automatic or semiautomatic lubrication of bearings on single machine units while they operate. One model applies oil at low pressure, and the other is for high pressure application of grease or oil. Illustration shows installation of this centralized lubrication system which includes pump, lubricant injectors, and cycle timer. Made by **Lincoln Engineering Co.**, 5782 Natural Bridge Ave., St. Louis 20, Mo.

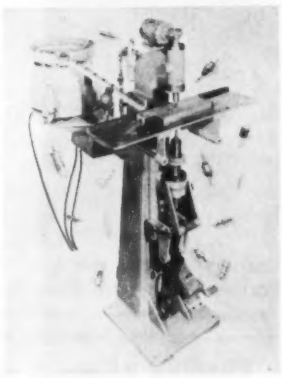
▲ For more details circle NED-696 K8 on enclosed inquiry slip ▲

HYDRAULIC FLUID FILTERS retain 0.45 micron size particles

Particulate contamination in hydraulic fluids used in precision servo valves can be eliminated by installation of large scale Millipore type filters. The stainless steel equipment uses a Microweb monofilament nylon reinforced filter. It is available in complete filter stand configurations or as filter plate units for connection to existing test and flush stands. Design permits ganging to accommodate any reasonable flow up to 40 gpm. They handle incoming oils on fill-flush-bleed stands, missile field test installations, component flushing, and recirculation of ultrasonic fluids. Made by **Millipore Filter Corp.**, Dept. ND, 36 Pleasant St., Watertown 72, Mass.

▲ For more details circle NED-697 K8 on enclosed inquiry slip ▲

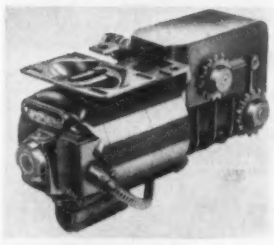
TERMINAL BOARD RIVETER spins terminals in selected pattern



Turret terminals are riveted into punched or drilled terminal boards with this special spin-riveting machine. Terminals are fed underneath the table and are raised by the anvil into the hole selected by the operator. Further pressure on the foot control actuates the spinning, air - operated pein with automatically controlled impact, anvil position, and speed and number of blows. All of these controlled elements are adjustable to the job. A wide range of types and sizes of turret terminals can be handled. Made by **Hill Machine Co.**, 1313 Eddy Ave., Rockford, Ill.

▲ For more details circle NED-698 K8 on enclosed inquiry slip ▲

OVERHEAD DOOR OPERATOR for doors up to 19 ft 2 in. wide



Standard industrial overhead doors up to 19 ft 2 in. wide and with up to 240 sq ft area can now be operated by this Barcol Model L electric door operator. This is an increase of more than 50 per cent over previous door size limits. A low-voltage control system is standard equipment. Any number of pushbutton controls can be connected in parallel, and remote-acting radio control can now be installed. New safety switch requires continuous finger pressure to close door, but opens on single contact to save time. The ⅓-hp motor is available for either 115-v single-phase ac or 220-v three-phase ac. It is instant-reversing and features enclosed safety switch with Fusetron overload protection. Made by **Barber-Colman Co.**, Dept. 8F, 1300 Rock St., Rockford, Ill.

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New Flush Valve

all-glassed head and stem

- One-piece head and stem glassed all over. No porcelain. No cement. Result is a much stronger, longer lasting valve.
- Seat made of rigidized Teflon—glass fiber. Since Teflon "gives" a little, you get firm seating without danger of cracking head covering.
- Completely static-free. Glass on Teflon seating cannot produce sparking.
- Rounded, glassed head eliminates product build-up.
- Costs no more than a conventional stainless steel valve.
- Interchangeable with existing valves.
- Sizes from 1½ x 1 to 8 x 6 in six models.

For complete specs write Dept. NED118 for Data Sheet 42.

THE PFAUDLER CO.
a division of PFAUDLER PERMUTIT INC., Rochester 3, New York

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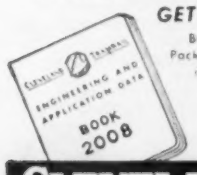
An enclosed freight carrier shuttling over a 666-foot Cleveland Tramrail track between two buildings is saving $7000 per year. The system has eliminated a drudgery disliked by labor and costly to management. No more manual pushing of heavy loads. No longer is work held up because of inclement weather. Handling accidents are done away with. Automatic Tramrail offers big dividends on your investment.



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CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6650 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

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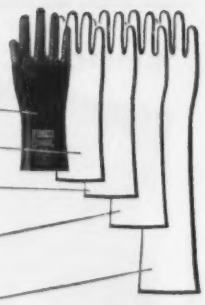
These Stanzoil® Milled Neoprene Gloves Guarantee Positive Liquidproof Protection in 103 Basic Oils, Acids, Caustics, Greases, Solvents

Black All Neoprene Stanzoils With Non-slip Grip

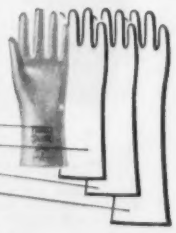
Model	Weight	Fingers	Length
N-31	Light	Straight	10½"
N-35	Light	Curved	10½"
N-32	Medium	Straight	11"
N-36	Medium	Curved	11"
N-41	Heavy	Straight	12"
N-44	Heavy	Curved	12"
N-51	Heavy	Straight	14"
N-33	Light	Straight	14"
N-54	Heavy	Curved	14"
N-71	Heavy	Straight	18"
N-73	Light	Straight	18"
N-74	Heavy	Curved	18"



White All Neoprene Stanzoils With Smooth Finish

Model	Weight	Fingers	Length
N-30	Light	Curved*	10½"
NW-31	Light	Straight	10½"
NW-32	Medium	Straight	11"
NW-41	Heavy	Straight	12"
NW-51	Heavy	Straight	14"

*Non-slip



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- ☐ 17" x 22" Full Line Glove Wall Chart
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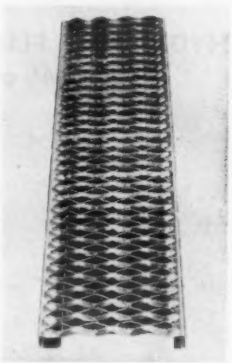
GAGING DEVICE
checks pitch diameter of gears

Pitch diameter of gears, splines, and worms can be checked easily with this gaging device. Mechanical amplifier mounted on gage body amplifies measurements five times. Step on top of amplifier shows whether or not minimum or maximum tolerances are exceeded. For optimum precision, steps are ground to +0.000 and −0.0005 in. Gages are obtainable for practically all size gears. Made by **Holmes Gage & Development Corp.**, Dept. NED, 537 Bonham Ave., Columbus 3, Ohio.

▲ For more details circle **NED-705 K8** on enclosed inquiry slip ▲

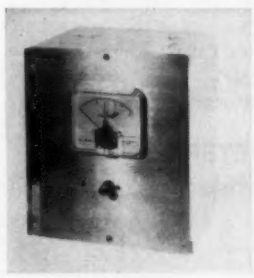
STAINLESS STEEL GRATING
10 and 12 ft long by 9½ in. wide



Added to standard line of gratings is this stainless steel Safety Grip-Strut unit offered in 10 and 12-ft lengths. This grating is recommended for installation in highly corrosive areas; for sanitary purposes in milk, food, or meat plants; and in chemical plants. It is 9½ in. wide and has 2-in. channels of 16-gage Type 302 stainless steel. Made by **Globe Co.**, Products Div., Dept. C, 4000 S. Princeton Ave., Chicago 9, Ill.

▲ For more details circle **NED-706 K8** on enclosed inquiry slip ▲

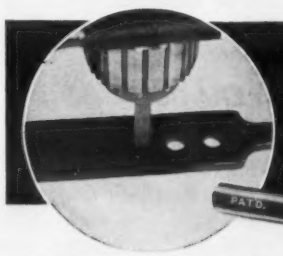
MOTOR OVERLOAD CONTROL
responds instantly to overloads



Overloaded electrical motors can be quickly stopped during a critical peak or starting load period by this fast-acting electrical control device. It responds instantly to all momentary overloads and is applicable to single-motor machine tools and conveyors, and multimotor transfer and automation devices. Action of the safe-load relay is controlled by a second or "limiting" pointer which can be set very close to the actual normal electrical power required by the drive. It does not interfere with the conventional pointer's movements across the dial face. Relay can also be reset instantly after the current is cut off. A pushbutton releases the pointer for normal starting after a safety shut down. Made by **Baker Perkins Inc.**, 1001 Hess St., Saginaw, Mich.

▲ For more details circle **NED-707 K8** on enclosed inquiry slip ▲

Drill Hardened Steels without Annealing—



USE The New IMPROVED "HARDSTEEL" DRILL

With the new, improved "HARDSTEEL" Drill, you can do accurate, smooth drilling, countersinking, counterboring and reaming in steels hardened by any process without first annealing the work. And they work with equal ease on work-hardening steels and high carbon—high chrome steels of any degree of hardness.

"HARDSTEEL" Drills fit standard drill presses. They save time and reduce rejects. They permit engineering changes requiring additional drilling after hardening. And parts drilled after hardening always match at assembly.

Write for a copy of the "HARDSTEEL" Operators Manual showing how "HARDSTEEL" drills are cutting costs in thousands of plants.

You Harden It—We'll Drill It—With "HARDSTEEL"

BLACK DRILL COMPANY, INC.
1380 East 222nd St. • Cleveland 17, Ohio

"HARDSTEEL"

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CAT. NO. 562 CAT. NO. 1014 CAT. NO. 107

HYDRO-LATCH RAMS

Single or double acting, tonnage capacity and length of travel to meet your specifications. Has spring loaded self-engaging latch as a safety factor, positive stop in case of hydraulic failure or to hold load for indefinite period. Clevis or Trunion mountings, manufactured of heat treated alloy steel, ram is polished and hard chrome plated with adjusting screw, ram end.

WILLIAM S. PINE
Custom Built Hydraulic Equipment and Hand Pumps
1635 E. 22nd St.
Los Angeles 11
Calif.

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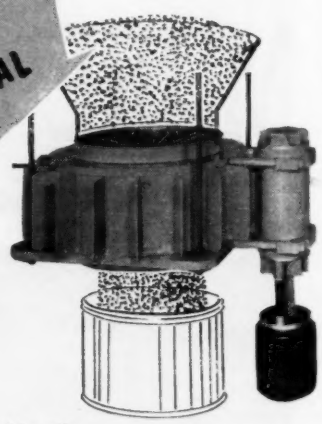
START HERE TO GET RID OF THE IRON IN DRY MATERIAL



FRANTZ FERRO FILTER® MAGNETIC SEPARATOR

An extremely simple but highly effective method of extracting iron particles from powdered and granular materials that you manufacture, buy, sell, or use in processing. Made in two sizes with capacities from 1 to 25 tons per hour depending on the nature of the material. Other FERROFILTERS available for handling liquids and slurries.

Send for BULLETIN 56-E

S. G. FRANTZ CO., Inc.
Brunswick Pike & Kline Ave.
P. O. Box 1138 Trenton 6, N. J.

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NOW! STOP WASTEFUL EXPENSE AT YOUR RAILROAD SIDING

IF YOU actually saw a Lo-Hed Car puller in operation you'd probably order one in a hurry. It is a first rate investment — pays for itself fast. It puts a stop to shifting charges. Cars get loaded and unloaded in record time. Demurrage charges are slashed. Industrial accidents are minimized . . . And a Lo-Hed Car Puller saves money *inside* a plant, too — pulls loads in a straight line, up grades and around corners.

Lo-Hed Car Puller is rugged, electrically-driven, built for trouble-free service. Write for folder telling you how to use a Car Puller in your plant.

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Dept. CP-184, Wheatsheaf Lane & Sepviva St., Philadelphia 37, Pa.
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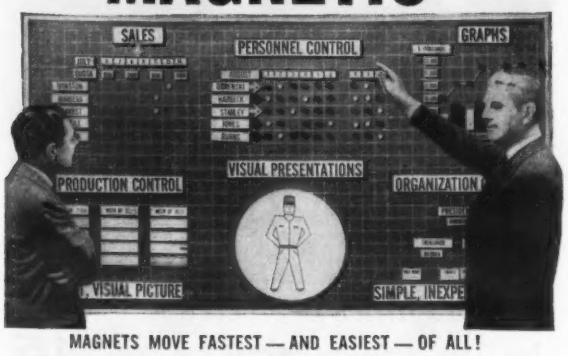
VISUAL **MAGNETIC** CONTROL



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SIMPLEST VISUAL SYSTEM FOR
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- Sales
- Maintenance
- Scheduling
- Machine Loading
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- Visual Presentations

COLORFUL MAGNETIC ELEMENTS
- show facts instantly
- organize for action
- eliminate mistakes
- get the job done

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PRICE LIST & BROCHURE NE10 FREE ON REQUEST

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Ordinary spring and Strippit Hydra-Spring of equivalent force.

equal stripping power in 1/6 the space

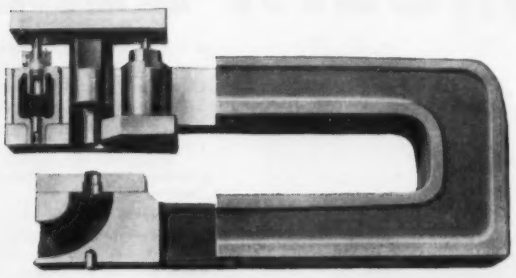
to cut your heavy-duty tooling costs!

Where high stripping pressures are required due to size and type of work or thickness of stock, Strippit Hydra-Springs are the answer. Utilizing the compressibility of liquids, Hydra-Springs develop up to six times the force of equivalent mechanical springs, greatly reducing the number, travel and size of stripping units required.

Impressive economies through Strippit flexible multiple-unit press setups

Like the Strippit, the Hydra-Spring is used in the Strippit line of independent, self-contained, self-stripping punching units. This is the tooling system that breaks the time and cost barriers of fixed perforating dies by permitting simple bench assembly setups . . . all but eliminating press down-time whether it's a long production run, a pilot run for design changes or a "repeat" run later on. No burring necessary, of course.

Whatever your piercing or notching application, don't miss the major savings so many industries are enjoying with flexible Strippit tooling. Write today for full details, and if you wish, a demonstration at your plant by a Strippit mobile unit.



Using Hydra-Springs for the heaviest duty work, the Strippit line of hole punching units offers a complete range of capacities up to ¾" in mild steel. A full stock of quick-change standard tools or "specials" made to your order. Warehouse stocks in Chicago and Los Angeles.

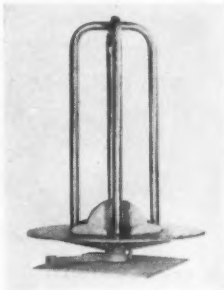
A UNIT OF HOUDAILLE INDUSTRIES, INC.

WALES STRIPPIT COMPANY
227 Buell Road • Akron, New York

Manufactured in Canada by Strippit Tool & Machine Limited, Brampton, Ontario

▲ For more details circle NED-713 K8 on enclosed inquiry slip ▲

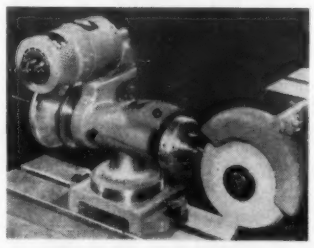
WIRE PAY OFF REEL
handles up to 4000-lb coils



Reduced downtime, change-over, scrap ends, and wire handling accrue from the use of this wire carrier and pay off reel designed for the wire producer and wire products manufacturer. Carriers handle up to 4000-lb coils, can be stored efficiently, and save floor space. Made by **Northern Indiana Steel Supply Co.**, Fabrication Div., Dept. D, Michigan City, Ind.

▲ For more details circle NED-714 K8 on enclosed inquiry slip ▲

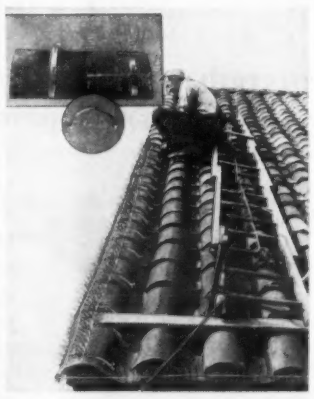
DRILL GRINDING FIXTURE
makes drill point self-centering



Need for center drilling or punching, drill bushings, or other means to maintain accurate center locations is eliminated by use of Helixpoint drills, produced on the Steptool relief grinding fixture. It fits any surface, tool, or cutter grinder to make a self-centering point on 2 to 24-flute drills. Fixture makes normal, extreme, and moderate Helixpoints for general purpose, nonferrous, and iron and steel drilling, respectively. Equipped with a collet, it accommodates drills from 0.0135 to 1 1/16 in. diameter. With a six-jaw chuck it takes No. 50 to 1-in. diameter drills and stub drills up to 1⅝ in. Larger capacity chucks are available. Made by **Steptool Corp.**, Dept. 3, 3613 E. Olympic Blvd., Los Angeles 23, Calif.

▲ For more details circle NED-715 K8 on enclosed inquiry slip ▲

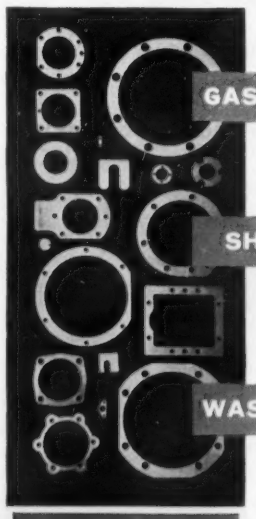
BIRD BARRIER
attached with clip or adhesive



The Nixalite bird barrier can be attached to tile roof ends by means of a half-moon metal clip. Where there are gutters at the open end of the tile, barrier can be installed on the outer edge and ends of the gutter instead. The multi-pronged barrier can also be attached with a special adhesive directly to roofing. Made by **Nixalite Co. of America**, 1722-26 First Ave., Rock Island, Ill.

▲ For more details circle NED-716 K8 on enclosed inquiry slip ▲

No Order TOO SMALL... or TOO BIG!



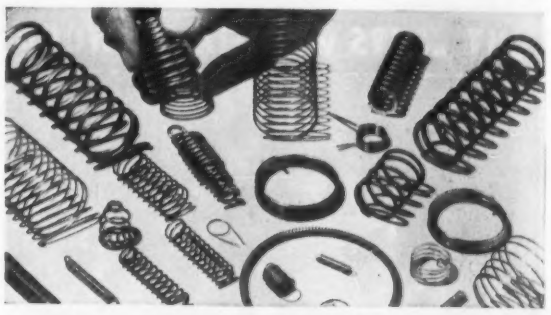
With more than 50 years' accumulation of dies, chances are we can furnish the gaskets, shims, or washers you need . . . *without a die charge*. This can cut your cost and speed delivery—whether you need just a few items or large quantities. Gaskets, shims, washers or special stampings are available in metallic, non-metallic and plastics to meet your production requirements.

NOW . . . WIL-PAK PLASTIC SHIM STOCK with thickness identified by color and gauge number. Write for Bulletin No. 570.

Write for Catalog and prices

CHICAGO-WILCOX Mfg. Co.
7713 South Avalon Avenue
Chicago 19, Illinois

▲ For more details circle NED-717 K8 on enclosed inquiry slip ▲



fine wire
engineered for the toughest jobs

National-Standard specializes in development of wire for springs, wire forms and for unusual direct application:
- Drawn wire in fine sizes of titanium, stainless and high carbon steel with all customary and special finishes.
- Trucoat and Micro-Tin music spring wires (Tradenamed N-S developments).
- Brassply, Copperply and Nickelply electroplated wires (Tradenamed N-S developments).
- Special-purpose wire strand and flat and tubular braid in steel and other metals.

Indicate your requirements and write for details.

National-Standard Company • Niles, Michigan

NATIONAL STANDARD

▲ For more details circle NED-718 K8 on enclosed inquiry slip ▲

OIL?
WATER?
GREASE?
No slipping hazard on
A.W. ALGRIP

ALGRIP's super-safe footing results from abrasive particles which have been rolled—*not coated*—to a controlled depth as an integral part of steel plate. These thousands of abrasive particles offer slip resistance—unaffected by oil, grease or water. Wear and tear merely expose more abrasive.

Make a test installation in your *worst* slipping area and watch ALGRIP pay for itself as accident and insurance rates go down. ALGRIP fabricates easily and requires no maintenance.

For complete information write on company letterhead to Dept. AL-E28.

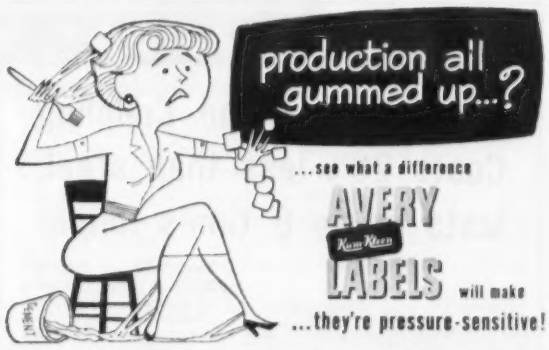
A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALGRIP—*approved for safety by Underwriters' Laboratories*

ALAN WOOD STEEL COMPANY
Conshohocken, Pa.

Other Products: A.W. SUPER-DIAMOND Rolled Steel Floor Plate—Plates—Sheets—Strip—(Alloy and Special Grades)

▲ For more details circle NED-719 K8 on enclosed inquiry slip ▲



■ Self-adhesive Avery Labels are quick, clean and neat... there's no mess, no fuss, no sticky fingers. Combined with patented Avery dispensers, they'll speed and simplify your labeling—and production! They're laid right on your product—*without moistening*. They'll put your trade mark on that hard-to-label surface... put a warning sticker or wiring diagram on your product or any clean, smooth spot. For inspection stickers... color coding... guarantees—they'll really speed production, packaging or any labeling or marking job!

■ Available in sheets or rolls... in any size, shape or color. Write for case histories and FREE SAMPLES—*today!*

AVERY ADHESIVE LABEL CORP., custom div. 1021
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☐ Tell us about your dispensers
☐ Have the Avery Label man call

Name _____
Company _____
Address _____
City _____ State _____

▲ For more details circle NED-720 K8 on enclosed inquiry slip ▲

CUT COSTS with FIR PLYWOOD

Fir plywood pallets save weight; cut maintenance costs at the big Heidelburg Brewery. Over 5,000 have been used since 1952. Comparison tests with other types show plywood pallets speed handling, sharply cut both maintenance and replacement costs. Company reports plywood saves nine lbs. per unit. Pallet failure has been virtually eliminated; repair costs are negligible.

Only plywood with DFPA grade-trademarks is made and tested under industry-wide Douglas Fir Plywood Association quality control program. Look for letters DFPA on the panel.

DFPA TESTED QUALITY

Write for New File Folder Catalog

DOUGLAS FIR PLYWOOD ASSOC., DEPT. 181, TACOMA 2, WASH.

▲ For more details circle **NED-721 K8** on enclosed inquiry slip ▲

Make Certain It's GENUINE

IMS Silicone Spray MOLD RELEASE

It Isn't Size—It's Quality That Counts!

EXCLUSIVE ALL-METAL FAST-ACTING SPRAY HEAD ENDS FUMBLING, SPEEDS APPLICATION, SAVES CYCLE TIME!

DELIVERED PRICES
Single Can $2.00
Unbroken Dozen . . . $18.00
Unbroken Gross . . . $197.40

Lower prices on larger orders shipped on your schedule as needed.

(Molders who've tried them all always specify IMS Silicone Spray!)

REMEMBER
PREPAID SAME DAY SHIPMENT

INJECTION MOLDERS SUPPLY CO.
3514 LEE ROAD • WYoming 1-1424 • CLEVELAND 20, OHIO

▲ For more details circle **NED-722 K8** on enclosed inquiry slip ▲

FREE CATALOG!

New Morse Nylon Coupling Costs 20% less than steel, lasts up to 6 times longer

Save 20% in cost, get up to 6 times the wear with amazing new Morse Nylon Couplings. They resist corrosion . . . need no lubrication . . . and can be assembled or disconnected at any link.

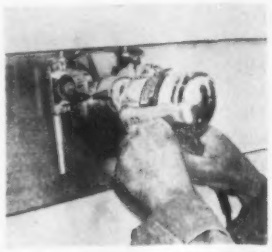
Data-packed Catalog NC-58 gives properties and features, applications, hp and rpm ratings, and costs of the new Morse Nylon Coupling. Write for your copy today to MORSE CHAIN COMPANY, DEPT. 19-108, ITHACA, N.Y. A Borg-Warner Industry. Export Sales: Borg-Warner International, Chicago 3, Illinois.

IN POWER TRANSMISSION THE TOUGH JOBS COME TO **MORSE** BW

*Trademark

▲ For more details circle **NED-723 K8** on enclosed inquiry slip ▲

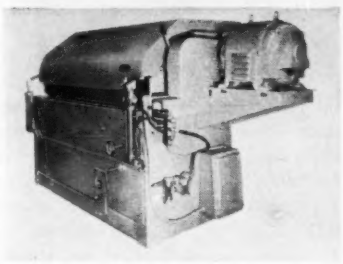
PAINT REMOVING TOOL
incorporates tungsten carbide discs



Paint removal, floor edging, sanding, and concrete surfacing are some of the jobs effectively performed by the Paint Remover. The portable electric tool can also be used to remove rust and scale, or prepare metal surface. It incorporates tungsten carbide discs and is easily adjusted for depth of surface to be removed or for sanding flush to clapboard overhang or vertical walls. Powered by 3.5-amp universal 115-v motor, unit has sealed ball bearings and helical gear drive. Kits comprising the Paint Remover and a variety of discs, assorted abrasive discs, rubber back-up pads, auxiliary handles, and wrenches are available. Made by **Porter-Cable Machine Co.**, 124 Exchange St., Syracuse 4, N. Y.

▲ For more details circle **NED-724 K8** on enclosed inquiry slip ▲

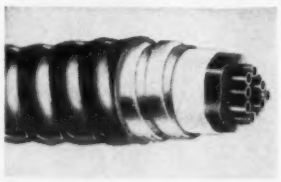
HIGH SPEED SANDERS
in 24 to 54-in. belt widths



Heavy duty, high speed models of the Timesaver Speedbelt sander are now available in belt widths from 24 to 54 in. Ram type construction with automatic jet air abrasive belt tracking assures accurate control at high speeds. Sanders can also be equipped with a dual-action polishing platen for a two-in-one cutting operation on woods and other materials, except metal. Two model designs provide for top or bottom sanding of work and can be used in tandem for doing both operations in one continuous material flow. Made by **Timesaver Sanders**, Dept. M-26, Box 7446, Robbinsdale Station, Minneapolis 22, Minn.

▲ For more details circle **NED-725 K8** on enclosed inquiry slip ▲

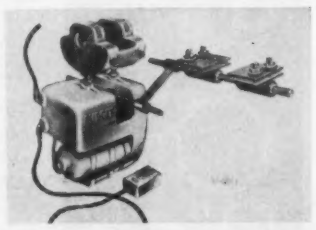
INSTRUMENT TUBING HARNESS
offered with galvanized steel armor



The Protecto-Pac instrument line harness shown is one of several products now available with impact-resistant steel jacket. Basic armor is composed of 24-gage galvanized steel of modified square-lock construction. Protecto-Pac Type FB is especially adapted to areas where weld splatter, sparks, or other potential fire hazards may exist. It consists of individual plastic tubes covered by a heavy thermal and shock absorbing plastic sheath, two layers of Mylar-backed asbestos insulating tape, metal armor, and a flame-retardant outer sheath of extruded plastic. Fire resistance is excellent at temperatures over 2500° F. Other instrument line products are also available with the steel armor. Made by **Samuel Moore & Co.**, Dekoron Products Div., Dept. NED, Mantua, Ohio.

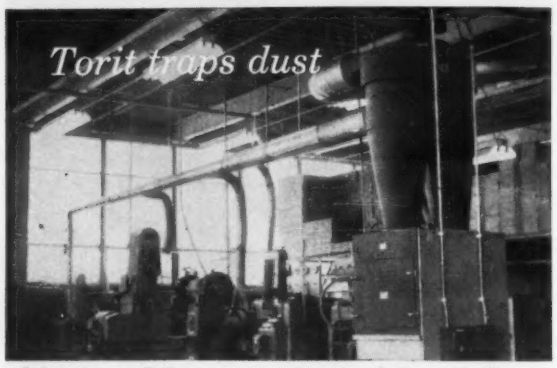
▲ For more details circle **NED-726 K8** on enclosed inquiry slip ▲

CRANE BRIDGE DRIVE
cushion-start type stops load swing



Cushion-start models have been added to line of Budgit drive units for converting manually operated crane bridges to electric drive. This model accomplishes smooth, even acceleration and braking. A special motor brake spreads the time lapse from full start to full bridge speed to maximum of 3½ seconds, suppressing the load's tendency to swing due to inertia. Operator controls bridge movement by suspended pushbutton station. Units can be installed on many makes of cranes with spans to 55 ft and capacities through 10 tons. Models are available for 220, 440, 550 v, and all have enclosed speed reducer, squirrel-cage motor, and magnetic contactor controller. Made by **Manning, Maxwell & Moore, Inc.**, Shaw-Box Crane & Hoist Div., Park St. & Broadway, Muskegon, Mich.

▲ For more details circle **NED-727 K8** on enclosed inquiry slip ▲



Six machines protected from dust by Torit for **$666.15**

This Torit Dust Collector, Model 219FM, complete with accessories, was installed by the Mohr Lino Saw Co., Skokie, Ill., to protect 3 belt sanders and 3 other grinders (2 grinders hidden from view) from destructive dust—at a total cost of just $666.15!

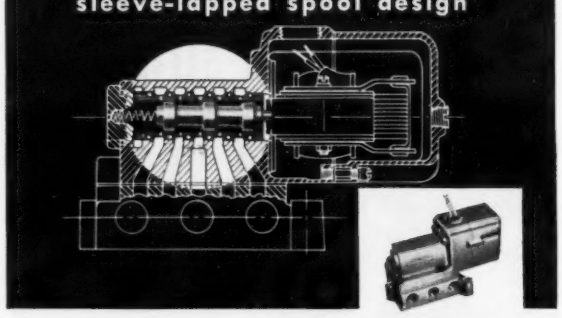
After one year's operation, Mohr Lino Saw says this about their *low-cost* Torit installation: "The Torit installation has kept our shop *cleaner*, our operators *happy*, and *protected vital* machinery."

You too can achieve greater machine protection and cleaner working conditions by trapping dangerous or valuable dust *at its source* with a completely *self contained* and *portable* Torit Dust Collector. For full details write to:

TORIT MANUFACTURING CO.
Dept. 203; 311 Walnut Street, St. Paul 2, Minn.

▲ For more details circle **NED-728 K8** on enclosed inquiry slip ▲

It's the air valve with floating sleeve-lapped spool design



Starts every time—INSTANTLY!
no sticking, lubrication or dirt problems

Valve sticking problems? Never happens with Numatics air valves . . . because the patented floating sleeve-lapped spool design eliminates moving elastic seals, the major cause of sticking. And no-stick, no-leak sealing is just one advantage of Numatics valves. They'll operate on any standard lubricant. They're unaffected by oil detergents or additives . . . and they'll run dry, too, if required! Dirt is no problem, either, because the file hard, razor sharp spool lands and orifice edges chop dirt particles to a fineness that permits passage through the valve without the slightest damage. Reliable is the word for Numatics valves. Get a catalog.

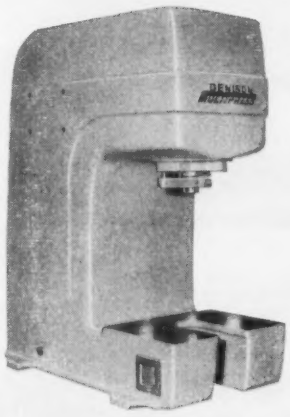
NUMATICS, Inc. HIGHLAND, MICHIGAN

SALES REPRESENTATIVES FROM COAST TO COAST

▲ For more details circle **NED-729 K8** on enclosed inquiry slip ▲

NEW from DENISON

2-TON HYDRAULIC MULTIPRESS



• Now—meet the hard-working "big brother" of Denison's popular 1-ton Multipress. Here's the *low-cost*, versatile press you asked for—

- For any job...assembly, forming, staking—101 more
- High-speed cycle time
- Ram Pressure 1,000 to 4,000 pounds
- Easy pressure adjustment
- Foolproof safety controls
- Manual or automatic operation
- Ample 10" daylight for tooling
- Compact—only 28½" high
- Lightweight—just 375 pounds
- Smooth, controlled *hydraulic* pressure does all your pressing jobs better and faster

Denison, Denison HydrOiLics, and Multipress are registered trademarks of Denison Eng. Div., ABSCO

Write for detailed Bulletin
DENISON ENGINEERING DIVISION
American Brake Shoe Co.
1192 Dublin Road • Columbus 16, Ohio

DENISON HydrOiLics
HYDRAULIC PRESSES
PUMPS • MOTORS • CONTROLS

▲ For more details circle **NED-730 K8** on enclosed inquiry slip ▲

NOW A
JUNIOR EMERGENCY PIPE CLAMP

A companion to the old reliable Emergency Pipe Clamp that has served industry for a half-century. Just 2⅞" wide. Made of malleable iron, it has a full-width hinge along one side, and a single oversized, plated bolt on the other. Lug on gasket half is slotted for "sliding" bolt into place—without removing nut. Gasket is cemented in. *Undersells most band-type clamps.* Write for circular.

M. B. SKINNER CO., South Bend 21, Indiana

▲ For more details circle NED-731 K8 on enclosed inquiry slip ▲

DI-ACRO NOTCHER
Speeds Production, Saves Extra Operations on Chassis Work

"I use our Di-Acro Notcher for practically everything," says V. Johnson of Maico Co., Inc., Minneapolis manufacturer of hearing testing equipment. "This machine speeds production—*provides one operation notching* of cold rolled steel, brass, phosphorous bronze and aluminum up to 16 gauge thick. It's also used for notching fish paper, sponge rubber, 1/16" linen Bakelite and other circuit insulating materials that go into chassis for audio testing equipment."

The 4 ton pressure of this machine has the capacity to cut a 90° notch as large as 6"x6" in 16 gauge steel *in one operation.* Adjustable gauges mounted on work table are standard. Hardened and ground triangular ram assures years of precision. A clean cut, free from rough edges and burrs, is possible because blade clearance can be easily set. For high speed production, a power model is available.

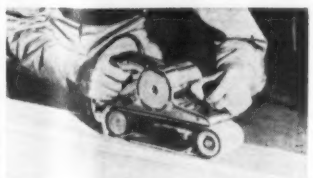
Di-Acro Notcher is used on the open end of this .064" aluminum chassis at Maico Co., Inc.

See Di-Acro Machines in operation at Booth No. 260 Nat'l Metal Exposition Oct. 27-31 Cleveland

O'NEIL-IRWIN MFG. CO.
354 8TH AVENUE • LAKE CITY, MINN.

▲ For more details circle NED-732 K8 on enclosed inquiry slip ▲

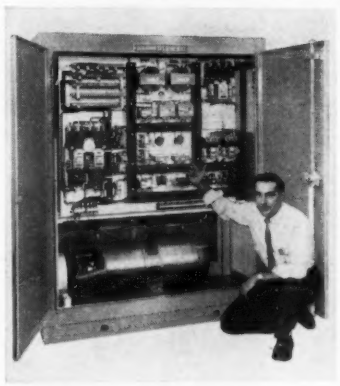
DUSTLESS BELT SANDER
attaches to any vacuum cleaner



Over 90 per cent of all sanding dust and fine metal powder is eliminated with the use of this portable dustless belt sander. Unit attaches to any standard industrial or domestic vacuum cleaner for dustless operation. Sanding can be done in the same area where painting is in progress. Foolproof, timing-belt-drive is smooth, quiet, and requires no lubrication. The flush-side feature allows sanding up to any vertical surface, and extended front pulley facilitates work on contours and small radii. Two other models also introduced are the dust collecting unit with centrifugal-type fan which blows dust into zippered bag and a basic model which converts to either the dustless or dust-collecting model. Made by **Black & Decker Mfg. Co.,** 762 E. Pennsylvania Ave., Towson 4, Md.

▲ For more details circle NED-733 K8 on enclosed inquiry slip ▲

ADJUSTABLE SPEED DRIVES
motor-generator type in 8:1 ratios



Packaged, motor-generator type, adjustable voltage drives are furnished with standard speed ranges up to 8:1 by armature voltage control. Ratings from 3 to 200 hp for single or multi-motor applications are available. Drives combine the use of transistors, magnetic amplifiers, and metallic rectifiers, and afford convenient arrangement of components and pre-wired terminals. They can be modified for use with machine tools, printing presses, test stands, slitters, conveyors, tube mills, and other types of continuous process lines. Made by **Square D Co.,** 4045 N. Richards St., Milwaukee 12, Wis.

▲ For more details circle NED-734 K8 on enclosed inquiry slip ▲

STUD DRIVER FOR MASONRY
tool-held fastener is hammer driven

Model T-25H fastening tool for driving fasteners into masonry, concrete, brick, and up to ¼-in. steel is a one-piece chrome-nickel steel drop forging with alloy drive ram and molded safety handgrip. Conic fasteners used with drive tool are rustproofed and are available in drive pin, ¼-20 and 8-32 threaded stud, and drive-ring types. Lengths range up to 4 in. Fastener, held in drive tool, is driven into masonry with a 2½-lb hammer. Made by **Hilti Rapid Fastening Systems, Inc.,** Dept. 121, 73 Southfield Ave., Stamford, Conn.

▲ For more details circle NED-735 K8 on enclosed inquiry slip ▲

HAND STROBOSCOPE
for timing fly and balance wheels

Timing of fly wheels and balance wheels in machinery, or any constant-speed, continuous-cycle motion are typical applications for this hand stroboscope. User obtains instantaneous views of objects in rapid motion and quantitative data on objects which carry out regular repeating patterns of motion. Stroboscope is held in hand so that disc is 1 to 2 in. from the eye. Disc is turned by index finger and moving object is observed through the slits in the disc. When motion of object appears to have stopped completely, its frequency can be calculated. Unit sells for $3.35. Made by **Edmund Scientific Co.,** 180 E. Gloucester Pike, Barrington 25, N. J.

▲ For more details circle NED-736 K8 on enclosed inquiry slip ▲

▲ For more details circle NED-737 K8 on enclosed inquiry slip ▲

TESTED & STRUCTURAL PIPE

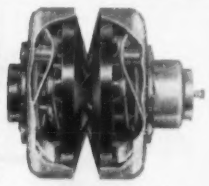
Send for Pipe Catalog NE 10

Especially the hard-to-get items and unusual large quantities, one call to Foster can get you the pipe you need—from one of the nation's largest pipe stocks. Try us for all sizes, ⅛" through 48", all walls—tested and structural, carbon, alloy, PVC and aluminum pipe, valves, fittings.

L B FOSTER CO.
PITTSBURGH 30 • ATLANTA 8 • NEW YORK 7
CHICAGO 4 • HOUSTON 2 • LOS ANGELES 5

▲ For more details circle NED-738 K8 on enclosed inquiry slip ▲

Hi-Lo Load-O-Matic Control Eliminates Pulley Slow Down



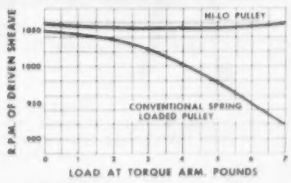
Hi-Lo Variable Speed Pulleys positively maintain the desired speed ratio over a wide range of load variation by means of an exclusive cam and cam follower assembly. This means: Pulley speed is independent of load and load changes. "Drag" is eliminated and high shock absorbency provided.

Pulleys do not compress belt due to spring pressure. Springs are not driving members. They act only to keep pulley faces in contact with belt.

Pulleys automatically regulate belt tension. Because of the cam assembly, belt is never under more tension than required by the load. Double cams maintain constant belt alignment.

Request details and prices. Ask for Bulletin A-458

HI-LO PULLEYS COMPARED TO OTHER VARIABLE SPEED PULLEYS



Available in sizes from .5 to 5 hp., ratios to 2.5/1 (single pulley) 6.25/1 (double pulley).

Manufactured By HI-LO MANUFACTURING COMPANY

Nationally Distributed By LOVEJOY FLEXIBLE COUPLING COMPANY
4953-H W. Lake St., Chicago 44, Ill.

▲ For more details circle NED-739 K8 on enclosed inquiry slip ▲

MEYCO MAINLINE

CARBIDE TIPPED SAWS

MEYCO MAINLINE carbide tipped saws with the *Uni-Chip* grind (alternating double-bevel and raker teeth) are the *Best* you can buy. Your results will be *Better*, because every tip is *Superhoned for Super Sharpness* . . . giving you the finest cuts and longer life . . . truly quality saws at prices you can afford.

MAINLINE is the complete line, a saw for every purpose, 6" to 16" diameters with different numbers of teeth. Remember—all **MEYCO** saws are *Satisfaction Guaranteed.*

Write today for catalog No. 69

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle **NED-740 K8** on enclosed inquiry slip ▲

Try it! You'll agree no other pipe thread and joint sealing compound seals like Marseal.

Marseal makes a permanent, solvent-proof flexible connection that lasts until taken apart. It is guaranteed!

- Insoluble in gasoline, oils, kerosene, L-P gas, refrigerants, chlorinated hydrocarbons
- Makes permanent joints — easy to take apart.
- Withstands pressure and vibration.

Write now for complete information and your special introductory offer!

MARGATE MANUFACTURING CO
MARGATE, NEW JERSEY

▲ For more details circle **NED-741 K8** on enclosed inquiry slip ▲

When figuring costs of bending pipe, tube or structural metal parts, you'll come up with a winning figure every time by using PEDRICK PRODUCTION BENDERS.

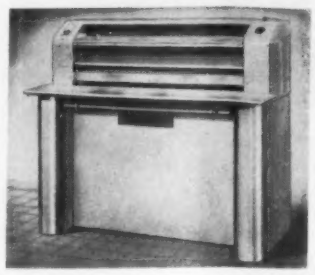
Let us give you a dollar and "sense" answer to *your* bending problems.
Write PEDRICK TOOL AND MACHINE COMPANY, 3640 N. Lawrence St., Phila. 40, Pa., Dept. 6

PEDRICK PRODUCTION BENDERS

Free "Pedrick Line" Bulletin. Write today.

▲ For more details circle **NED-742 K8** on enclosed inquiry slip ▲

WHITEPRINTING MACHINE accommodates 45-in. wide prints



Compact Scout dry process whiteprinter will accommodate prints up to 45 in. wide and of practically any length. Machine has two-step feed and will print and develop in cut sheets or rolls anything typed, written, drawn, or photographed on reasonably translucent material at speeds up to 20 fpm. It has a 2000-w printing lamp, removable from either side, and a ribbed rubber sealing sleeve which conveys prints through the developer over a perforated Teflon slip-screen. Print tray is adjustable. The all-steel unit has a smooth hammerloid finish. Made by **C. F. Pease Co.**, 3973 N. Rockwell St., Chicago 18, Ill.

▲ For more details circle **NED-743 K8** on enclosed inquiry slip ▲

FILLER-DISPENSER CAN for handling flammable liquids

Gasoline, oil, or similar flammable liquids are safely stored or handled in the heavy-duty Type 2 industrial filler-dispenser can. Body and breast of can are seamless-drawn from one-piece 24-gage terne - coated steel and welded. A 16-gage steel hoop reinforces the bottom. To open, the free - swing carry-operating handle is engaged in gear groove of connecting arm and pressed down. Flexible metal pouring spout and filler opening have double wire mesh fire baffles or screens for fire protection. Valve at base of flexible spout, operated by free-swing handle, controls pouring. Safety can is made in 2½ and 5-gal sizes by **Eagle Mfg. Co.**, 2545 Charles St., Wellsburg, W. Va.

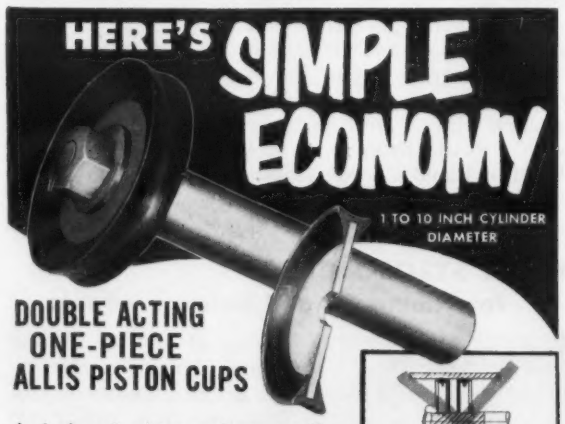
▲ For more details circle **NED-744 K8** on enclosed inquiry slip ▲

Zinc Newsletter

American Zinc Institute, Inc.—The first issue of a quarterly newsletter entitled "The Zinc Spotlight" brings a wide variety of news about zinc and the zinc industry. This issue includes details of the new expanded research program underwritten by joint zinc-lead industries here and abroad, plus a cross section of design stories and case histories. Interested executives can receive it regularly.

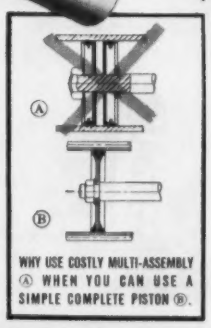
▲ For more details circle **NED-745 K8** on enclosed inquiry slip ▲

HERE'S SIMPLE ECONOMY



DOUBLE ACTING ONE-PIECE ALLIS PISTON CUPS

A single unit piston and cup packing. Made of brass plated steel or solid brass metal disc. Specially compounded rubber is securely bonded to the metal. Designed for oil, air or water applications, lips are designed to maintain uniform pressure on cylinder walls insuring constant sealing action. Used in cylinders—feeds—filling machines, clamps or vises, hoists, pumps, valves, etc.



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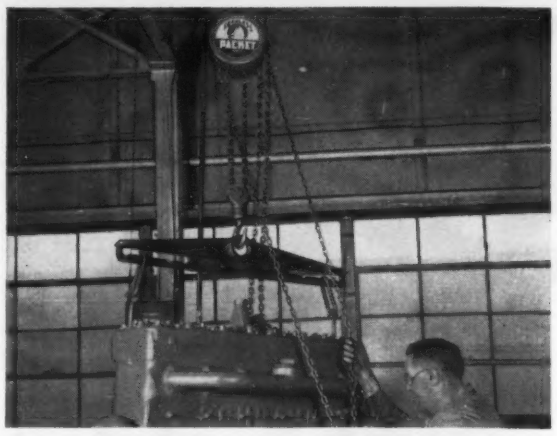
BULLETIN 108

SINCE 1899
CHICAGO-ALLIS MFG. CORP.
Producers of CHICAGO BELTING • ALLIS RUBBER • ALLIS SEAL Products
130 NORTH GREEN STREET • CHICAGO 7, ILL.

▲ For more details circle **NED-746 K8** on enclosed inquiry slip ▲



Easy Pull is a laborsaving feature of Peerless Packet Hand Chain Hoists

Prelubricated ball bearings, simplified gearing, and easy-to-grip hand chain links take the strain out of lifting with a Peerless Packet Hand Chain Hoist. A pull of only 42 lb. lifts the maximum load with the ½-ton model, 56 lb. with the 1-ton model, and 60 lb. with the 2 ton. Drop forged heat-treated steel hooks and heat-treated steel chain, strong and flexible, hold the load. Of enclosed design, it withstands rough handling, keeps out dirt, reduces maintenance. For complete information, send for Bulletin P-5.

THE HARRINGTON COMPANY
Plymouth Meeting 16, Pa.

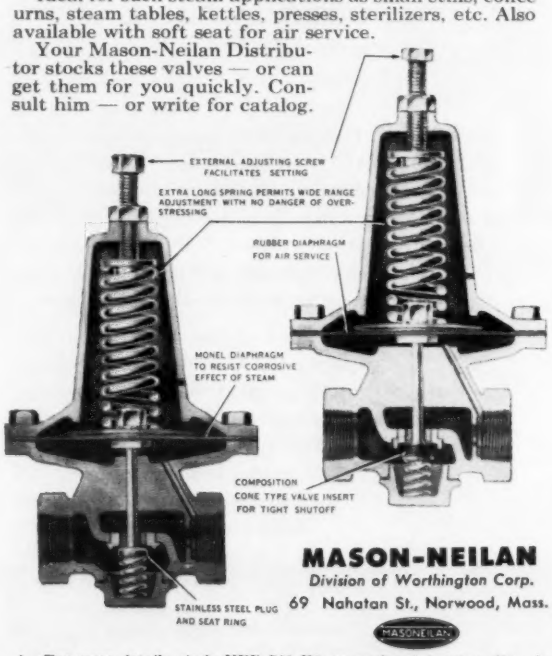
Hand Chain Hoists (¼ to 60 tons) • Electric Hoists (170 to 4000 lb.) • Trolley Hoists (¼ to 12 tons) • Lever Pullers (¼ to 1½ tons) • I-Beam Trolleys (¼ to 20 tons)

▲ For more details circle **NED-747 K8** on enclosed inquiry slip ▲

Accurate, Tight Closing Reducing Valves Simplify Operation of Small Steam and Air Systems

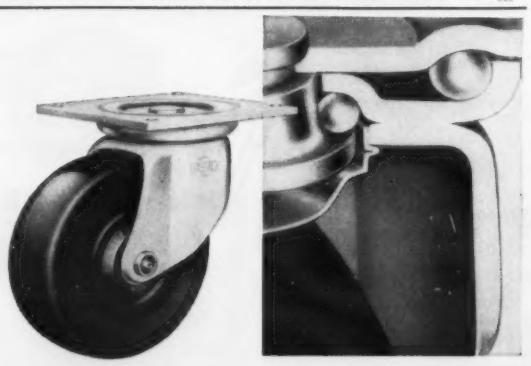
Ideal for such steam applications as small stills, coffee urns, steam tables, kettles, presses, sterilizers, etc. Also available with soft seat for air service.

Your Mason-Neilan Distributor stocks these valves — or can get them for you quickly. Consult him — or write for catalog.



MASON-NEILAN
Division of Worthington Corp.
69 Nahatan St., Norwood, Mass.

▲ For more details circle **NED-748 K8** on enclosed inquiry slip ▲



EASY SWIVELING

The swivel bearing of a Bassick H99 medium duty caster is designed for performance, built to last.

Double ball races, extra large Grade A balls make swiveling easy. Fully hardened bearing surfaces, heavy king pin and projection welding of horn and ball cup into a single unit insure strength, long life. Sealed bearing models available.

Your nearby Bassick distributor will be glad to show you these medium duty or the heavy duty Bassick S99 casters for general industrial application. THE BASSICK COMPANY, Bridgeport 5, Conn. *In Canada:* Belleville, Ont.

8-37

Bassick SYMBOL OF EXCELLENCE

▲ For more details circle **NED-749 K8** on enclosed inquiry slip ▲

BARDEN LOW TORQUE BEARING FEATURES EXTRA-LARGE OUTER RING DESIGNED TO ELIMINATE END CAP

The *Barden Precision* SR3SSX8 is an extremely accurate low torque bearing with an extra large outer ring designed to serve as a synchro end cap.

Integration of end cap and bearing outer ring increases air gap accuracy, simplifies synchro design and reduces assembly cost.

Other features of this special purpose bearing are closely controlled radial play and unusually low total eccentricity—also essential to air gap accuracy.

Like other *Barden Precision* bearings, standard or special purpose, the SR3SSX8 has dimensional accuracy and uniformity to meet the most critical demands, plus *performance* to match the specific needs of the application.

Barden Precision bearings are available in a full range of standard miniature and instrument sizes, plus hundreds of modifications and special designs.

The Barden Corporation, 59 East Franklin Street, Danbury, Connecticut. Western office: 3850 Wilshire Boulevard, Los Angeles 5, Calif.

Write for catalog, engineering data or application assistance. Advt.

▲ For more details circle **NED-750 K8** on enclosed inquiry slip ▲

HERE'S THE WAY TO CUT THOSE ★!*!dx PRODUCTION COSTS

SPECIFY **STALWART** PRECISION RUBBER PARTS

Modern production equipment and years of compounding experience are combined at Stalwart to provide important savings in product design and production costs. Extruded, molded, die- and lathe-cut parts are mass-produced at realistic prices from all types of rubber, including Neoprene, Hypalon, Hycar, Buna N and Silicones. Rubber parts offering extreme resistance to oils, temperature, abrasion, weather and chemicals are produced to meet individual operating requirements. And Stalwart is the only producer of extruded and calendered silicone sponge shapes! Write for complete information.

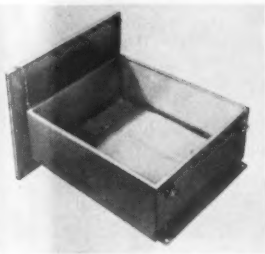
STALWART RUBBER COMPANY
151 Northfield Road • Bedford, Ohio
Plants in Bedford, Ohio and Jasper, Georgia

Get all the facts . . . Write for Bulletin 56-SR-3

S104-SR

▲ For more details circle **NED-751 K8** on enclosed inquiry slip ▲

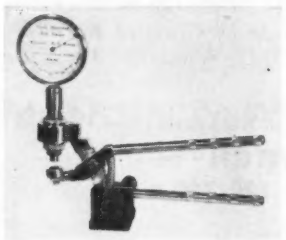
ELECTRICAL BOXES manufactured to JIC standards



Made of code gage steel with all seams welded, this line of JIC standard electrical boxes includes eight different sizes. They may be used as terminal wiring boxes, panel or instrument enclosures, and as substitutes for cast boxes. Finish is a silver gray hammertone. Made by **McKinstry Metal Works, Inc.**, Dept. 20-1, 285 McKinstry Ave., Chicopee, Mass.

▲ For more details circle **NED-752 K8** on enclosed inquiry slip ▲

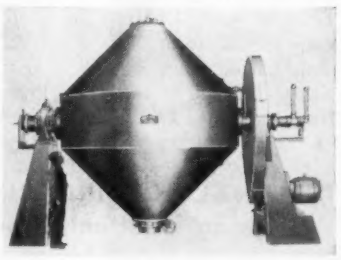
HARDNESS TESTER checks sheet metal up to 80 R 30-T



Operated by a plier arrangement shown, this Oppel hardness tester is used to precision test thin sheet metal for cans and other products during the manufacturing process, or in stock. Tester has range from 45 to 80 Rockwell 30-T units. No preparation or cut-out of material is required to make a test which takes only a second. Instrument is highly accurate by virtue of a hardened and exchangeable flat testing table, mounted to the pliers, and precision test blocks for calibrating and adjusting. Made by **Company for Technical Progress**, Desk A, 4056 Reading Rd., Cincinnati, Ohio.

▲ For more details circle **NED-753 K8** on enclosed inquiry slip ▲

VACUUM DRYER has internal volume of 500 cu ft



Operating at very high vacuums and constructed of stainless steel, the 500-cu ft Roto - Cone vacuum dryer has a 10-ft ID drying chamber. Internal pressures as low as 10 mm Hg absolute can be realized. As the dryer rotates, a heating fluid circulates through the Fiberglas insulated jacket surrounding the drying chamber. Large vacuum line rapidly removes large amounts of released moisture. Unit is driven by a 40-hp Motoreducer and equipped with a magnetic brake for accurate load and discharge positioning. Entire batch is blended as it is dried. Unit can also be used as a dry blender. Made by **Paul O. Abbe Inc.**, 253 Center Ave., Little Falls, N. J.

▲ For more details circle **NED-754 K8** on enclosed inquiry slip ▲

FOR SPEED and SAVINGS...

Specify NAYLOR PIPE, FITTINGS and FABRICATIONS

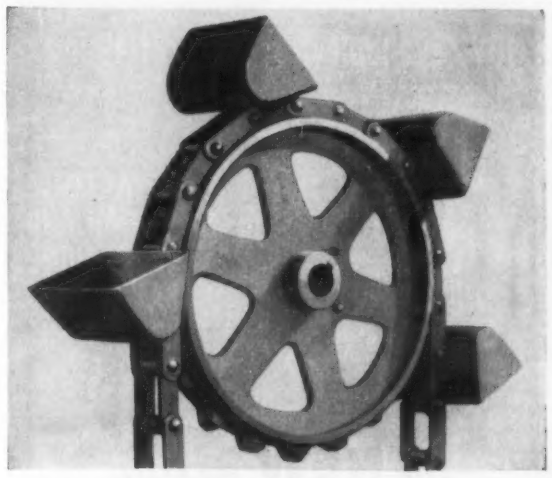
For Exhaust Systems • Water Lines
Air Lines • Gas Lines • Compressed Air Lines
Ventilating Lines • Process Lines • Pneumatic Conveyors
Sludge Lines • Vacuum Lines • Drainage Lines

NAYLOR pipe combines light weight with the extra strength and safety you'd expect only in heavier pipe. Its spiral-lockseam structure helps to absorb shock loads and vibration. Available in carbon steel, alloys and stainless steel—in diameters from 4" to 30". All types of fittings, fabrications and connections, including the one-piece NAYLOR Wedgelock coupling that speeds installation, cuts costs.

Write for Bulletins No. 507 and 525.

NAYLOR PIPE COMPANY
1247 East 92nd Street
Chicago 19, Illinois
Eastern U.S. and Foreign Sales Office:
60 East 42nd Street, New York 17, N. Y.

▲ For more details circle **NED-755 K8** on enclosed inquiry slip ▲



Choose JEFFREY for long life!

Jeffrey chains, sprockets, pulleys, takeups and buckets are sound in design; materials and workmanship are the finest. Replace worn parts with dependable Jeffrey equipment. Stocked by Jeffrey distributors.

JEFFREY

THE JEFFREY MANUFACTURING COMPANY • COLUMBUS 16, OHIO

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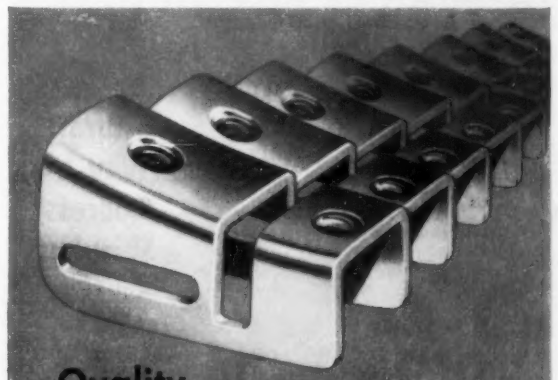

Quality STAMPINGS *in any quantity*

Whatever your requirements, P-M can design and produce custom-engineered stampings quickly and dependably in any quantity you specify. Send specifications for free estimates or write for details today.

PATTON-MacGUYER COMPANY **P-M**

16 Virginia Ave., Providence 5, R. I.

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It's OK Boys

I use the Modern Safety Drill Table for all sorts of jobs. No more bother with clamps, V-blocks, parallels. Instead of spending 20 minutes to make a tough set-up, I just drop in the work and am ready to drill in a couple minutes. I save a lot of time. In fact, the company guarantees that this combination drill table and vise will save its cost on labor alone in six months in your shop.

FREE TRIAL OFFER

Try it for 30 days at our expense. Write for illustrated literature and full details.

MODERN MACHINE TOOL CO.
2005 LOSEY AVENUE
Jackson, Michigan

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NOW available for the first time...

DETAILED SELECTION AND APPLICATION DATA FOR METAL HOSE

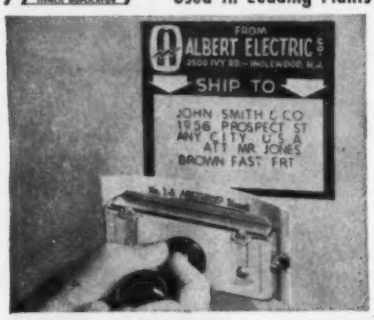
THE NEW FLEXON METAL HOSE DESIGN GUIDE

Here is the booklet that takes the mystery out of metal hose. It gives you—fundamentals of metal hose . . . how to select metal hose . . . installation guides . . . typical examples of applications . . . corrosion data . . . fitting data . . . plus complete Flexon hose specifications. All in a handy 36-page booklet. Ask for your copy today.

Flexonics Corporation
1343 S. THIRD AVENUE • MAYWOOD, ILLINOIS
In Canada:
Flexonics Corporation of Canada, Ltd., Brampton, Ontario

For more details circle NED-759 K8 on enclosed inquiry slip

MULTISTAMP Used In Leading Plants All Over the World



The Quick.. Accurate Way to Address Shipping Cartons

VOLUME MARKING

Print shipping information direct on cartons, boxes, packages. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil . . then type or write in address or identification data . . attach to duplicator . . and print. Write for literature and free sample FORM-CUT stencil.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Model 1A shown in use above, complete with supplies in sturdy case, $12.50 f.o.b. factory. No. 3 Outfit (at right) $19.50 f.o.b. factory. Also ideal for addressing shipping tags, labels. Prints forms, bulletins, post cards, etc. At office and shipping room supply dealers.

OVER 35 YEARS MULTISTAMP STENCIL DUPLICATOR ® THE MULTISTAMP CO. NORFOLK, VA.

For more details circle NED-760 K8 on enclosed inquiry slip

HANKISON CONDENSIFILTERS

REDUCE *maintenance* MAINTAIN *accuracy*

in pneumatic instruments, controls, and machinery

- CONDENSE oil and moisture vapors—for maximum protection of pneumatic systems
- SEPARATE entrained liquids—preventing corrosion and sluggish equipment
- FILTER contaminant solids—scale, rust, dirt, with disposable cartridge
- DISCHARGE all condensates and entrainments with built-in, automatic Mag-Pneu-Power Trap

4 units in 1
- Separator
- Condenser
- Filter
- Trap

Capacities: M-100T, 100 scfm at 100 psig; M-30T, 30 scfm at 100 psig. Both models of rugged construction, require only 1 hour per year servicing.

WRITE FOR BULLETIN 4158
HANKISON CORPORATION
College & Pike Canonsburg, Penna.

For more details circle NED-761 K8 on enclosed inquiry slip

ABRASIVE BELT UNIT
handles inside surface grinding

Inside surface grinding jobs where clearance is a factor, as well as many small jobs, are handled by the Model TS-90 abrasive belt unit. It uses a 90-in. long belt in widths of 1 or 2 in. and is suitable for removing flash or parting line on nonferrous castings, molded rubber and plastic parts; sharpening special shape dies; or for sanding of ornate wood scroll work. Platen and slack-belt grinding can be done on standard model. A rubber-covered contact wheel and adjustable tilting table are available accessories. Unit can be purchased with or without motor. Made by **Grinding & Polishing Machinery Corp.**, 2530-G Winthrop Ave., Indianapolis 5, Ind.

For more details circle NED-762 K8 on enclosed inquiry slip

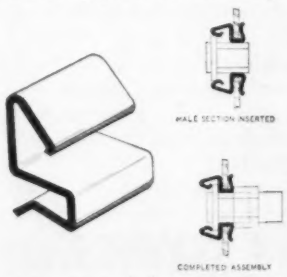
THERMOSTATIC SWITCH
rated 2500 w at 120-240 v ac

This Temtrol Type A thermostatic switch is a compact electric switching device which makes or breaks an electrical circuit on a change in temperature. It can be used in dishwashers, incinerators, welding equipment coolers, large outdoor motors, lab ovens, aircraft defrosters, electric heating panels, and commercial defrost equipment. It is relatively unaffected by vibration, assuring operation at selected setting without drift. It is rated 2500 w at 120-240 v ac; 4.4 amp full load for motor duty, 26.4 amp locked rotor, 120 v ac; 2.2 amp full load, 13.2 amp locked rotor at 240 v ac. Pilot duty is 125 v-amps, 120-240 v ac. Distributed by **Penn Controls, Inc.**, Industrial Div., 1500 E. Monroe St., Goshen, Ind.

For more details circle NED-763 K8 on enclosed inquiry slip

TERMINAL-HOLDING CLIPS
spring steel units snap into panel

Through-panel application of solderless multiple-connector electrical terminals is possible with Speed Clips which require no auxiliary fastening devices. A pair of the fasteners is snapped in punched hole in panel. Flanges prevent the inserted terminal connector from passing through the panel and the Speed Clips prevent it from being pushed out when the other half of the connector is applied. The vibrationproof fasteners are removed by compressing their spring legs with pliers. Made by **Tinnerman Products, Inc.**, Dept. 14, Box 6688, Cleveland 1, Ohio.



For more details circle NED-764 K8 on enclosed inquiry slip

STANDARDIZED ENCLOSURES
cabinets, consoles, rack cabinets

Line of instrument enclosures, comprising cabinets, consoles, and standardized modular rack cabinets, has design that permits easy modification and adaptation to individual needs. Units can be added and the set-up expanded as needed. Standardized units include a console with sliding desk shelf and a cabinet with hinged back and front doors. Formed construction, "hat-section" reinforcing, and adjustable Unistrut channels to facilitate equipment mounting are among design features. Units are made of 16-gage cold rolled steel, but can be made in 14-gage magnesium, aluminum, stainless, and other metal alloys. Made by **Falstrom Co.**, 163 Falstrom Court, Passaic, N. J.

For more details circle NED-765 K8 on enclosed inquiry slip

Sutton NEW IMPROVED MOTOR DRIVEN PRESSURE BLOWER

ONE-PIECE HOUSING
SELF-CLEANING WHEEL

For
EXHAUSTING
Dust . . Smoke
Fumes . . Vapor
COOLING
DRYING
CONVEYING
Cotton . . Wool
Shavings
FORGE BLASTING

3 SIZES
¼, ½, 1 H. P.

STRONG . . LIGHT
CAST ALUMINUM

Even, non-pulsating air flow . . 100-800 cu. ft. per min. at ½" to 6" static pressure. Straight wall construction cuts windage . . ups efficiency. 3450 r.p.m. direct connected 60-cycle motor . . open or totally enclosed. Set discharge in 8 different positions.

WRITE FOR DESCRIPTIVE LITERATURE

Sutton Manufacturing Corp.
112 W. WILSON AVENUE
NORFOLK, VIRGINIA

For more details circle NED-766 K8 on enclosed inquiry slip

Simple—Accurate—
WEIR METERS
for Waste Measurement

● Float-and-cable Weir Meters developed by Foxboro offer simple, accurate measurement of liquid flow. Widely used in sewage, chemical processes, and industrial waste disposal.

The Foxboro Weir Meter is extremely simple. Operates through motion of float to measure head through V-notch, rectangular or Cippoletti weirs—or Parshall flumes. Motion is transmitted by cable to accurate recording and integrating mechanisms. Direct-reading, uniform flow scale—copper or plastic-covered floats.

Write for Bulletin 10-19, The Foxboro Company, 6610 Norfolk Street., Foxboro, Mass., U. S. A.

FOXBORO Reg. U.S. Pat. Off. WEIR METERS

For more details circle NED-767 K8 on enclosed inquiry slip

THE "Write" LABEL... Anywhere!

WON'T SMUDGE

RESISTS: DIRT GREASE WATER ACIDS

STICKS WITHOUT MOISTENING

LABELON PLASTIC Write on it TAPE

Use Labelon "Write on it" Tape to label stockroom shelves, bins, tools, hard-to-mark parts; for indicating rejects and service department repairs; for marking laboratory equipment, supplies, experiments; for panel boards or wiring; for office files, folders, etc.

For samples and prices, see your dealer or write Dept. NED-10

LABELON TAPE CO., INC.
450 Atlantic Ave., Rochester 9, N. Y.

For more details circle NED-768 K8 on enclosed inquiry slip

CROSBY-LAUGHLIN

Load-Rated*

FITTINGS

FOR YOUR DESIGN

Save design time, shop time—specify Crosby-Laughlin* LOAD-RATED Fittings that are pre-designed . . . *ready immediately* for your application. Always consistent, these fittings have uniform appearance . . . quality . . . no rejects! Free specifications catalog contains engineering-dimensional data on over 2000 items. Order from the world's most complete line of drop forged fittings for wire rope and chain. Industrial, construction and mill supply distributors have catalog —or write: *Trademark

CROSBY-LAUGHLIN *Division*

AMERICAN HOIST & DERRICK COMPANY

FT. WAYNE, INDIANA

▲ For more details circle NED-769 K8 on enclosed inquiry slip ▲

ARCWELD MODELS CE, JE

Two Musts For Accurate

Creep Rupture Testing

Arcweld Model CE Creep Tester

Performance-proved Model CE offers two capacity choices: 12,000 or 20,000 pounds. Occupies only 817 square inches of floor space. Operated by push button electric weight elevator or automatic inch-down. Elevator maintained fraction of inch below weight pan. Prevents shock when specimen breaks. Other features: adjustable counterbalanced lever arm • precision knife edges • substantiated axial alignment • self-aligning, heat-resisting grips • keyed lower extension grip • optical creep measuring equipment.

Compact, economical Model JE was developed for plants with limited floor space. Available in 12,000, or 20,000-pound capacity. All control instruments mounted on single-hinged panel. Automatic creep recording equipment. Precision guided-way drawhead offers ultimate in operating possibilities when specimen must be tested without shock, bending, torsional or cyclic effects, varying load or axiality. Drawhead travel for more than 5 inches also available.

Above machines available with vernier adjustment on lever for ratio calibration. Dual ratio lever system also available at slight additional cost. Write today for more information.

ARCWELD MANUFACTURING COMPANY

P. O. Box 311, Grove City, Pa.

▲ For more details circle NED-770 K8 on enclosed inquiry slip ▲

4 more cost-cutting examples of

P-E ALUMINUM

Extrusioneering

Here are more examples of P-E Aluminum Extrusioneering. All angles, flutes and varying thicknesses required for each piece are produced in a single operation without machining. Each design offers inherent advantage of greater strength in less weight and the plus benefits of a durable, non-corrosive finish. Perhaps our non-competitive mill service can help you improve your product and cut costs. Over 5,000 standard shapes are available without die charge.

WRITE for *Extrusioneering News*—gives case reports and helpful technical data.

PRECISION EXTRUSIONS, INC.

734 E. GREEN AVENUE BENSENVILLE, ILL.

PHONE: POrter 6-0098 • (Chicago) TUxedo 9-1701

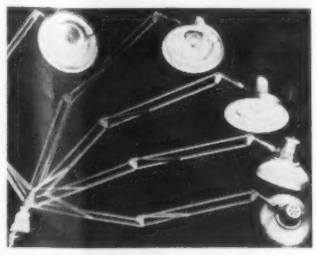
Chicagoland's Oldest, Most Experienced Aluminum Extruder

REGIONAL SALES OFFICES

St. Paul	Milwaukee	Grand Rapids	Philadelphia	Los Angeles
MI 6-2887	BR 3-6446	GL 1-2511	MA 7-6860	BR 2-8721

▲ For more details circle NED-771 K8 on enclosed inquiry slip ▲

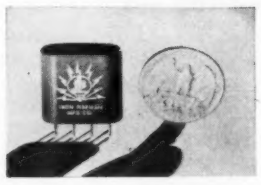
SWING-ARM LAMP
is fluorescent-incandescent unit



Fluorescent and incandescent lighting are combined in this improved Swing-O-Lite adjustable swing-arm lamp for inspection, assembly, production, and many other industrial uses. The 22-w Circleline lamp is offered in various colors, and the incandescent lamp can be a 60, 75, or 100-w bulb. Reflector is designed to provide glareless, shadow-free light. Position is readily adjusted, and it remains so in spite of vibration. Lamp can be mounted on machine, bench, desk, drafting board, table, wall, or other location. Outlet in base of lamp allows a series of units to be connected to the same outlet, or permits the use of electric tools or appliances. Made by **Swing-O-Lite, Inc.**, 13A Moonachie Rd., Hackensack, N. J.

▲ For more details circle NED-772 K8 on enclosed inquiry slip ▲

MICRO-MINIATURE RELAYS
withstand up to 50-g shock



Voltage-sensitive and current-sensitive micro-miniature relays are designed specifically for the 0.1-in. grid spacing of printed-circuit layouts. They have straight-pin terminals with a 0.2-in. module. Units conform to MIL-R-5757C and operate dependably when subjected to 50-g shock and vibration of 55 to 2000 cps at 20 g. Temperature range is from −65 to 125° C. Contacts are rated 2 amp resistive at 28 v dc or 115 v ac. Relays are offered in 10 different standard coil resistances in plain can, or with top stud, flange, side bracket, or stud mountings. Made by **Iron Fireman Mfg. Co.**, Electronics Div., 2839 S.E. Ninth Ave., Portland 2, Oreg.

▲ For more details circle NED-773 K8 on enclosed inquiry slip ▲

MAINTENANCE LIFT
lifts 500-lb platform load 40 ft

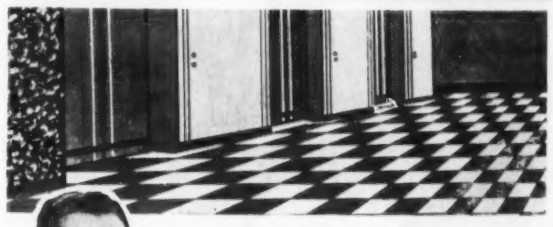
Extremely low center of gravity with resulting safety factor of more than 5 to 1 enables the Model 40 Lift-A-Loft to lift a 500-lb platform load to height of 40 ft with a reach over obstructions of 15 ft. The self-propelled unit is operated by one man and has a 5-hp heavy duty drive motor. The 20-in. dual drive mechanism is installed to allow 90-degree turns. Unit can thus swivel in its own length. It is especially applicable in maintenance of large aircraft, warehouses, and in high bay factory areas. Large model series affords lifts up to 50 ft. Made by **Lift-A-Loft Co.**, Dept. I, Box 1225, Muncie, Ind.

▲ For more details circle NED-774 K8 on enclosed inquiry slip ▲

PHOTOELECTRIC RELAY
heavy-duty unit is transistorized

Transistorized, heavy-duty Transeye photoelectric relay, consisting of a control panel, light source holder, and photocell holder, will function at rate of 300 operations per min. The miniature light source and phototube holder will operate at a light beam distance up to 8 ft. Greater distances are possible with optional light sources. Relay can be used to energize magnetic counters, conveyor switching devices, magnetic contactors, and motor starters; or can be employed in counting, diverting, sorting, detecting, and inspection applications. It will indicate overtravel, level, or obstructions. Life expectancy of the hermetically-sealed, plug-in unit is well over 20 million operations. Made by **General Electric Co.**, 1 River Rd., Schenectady 5, N. Y.

▲ For more details circle NED-775 K8 on enclosed inquiry slip ▲



'Here's why we chose

LEGGE FLOOR POLISHES"

(a true story)

"We tested dozens of products on our resilient floors before zeroing in on a LEGGE Polish.

"Then Purchasing got into the act, challenging us on the question of economy. We in Plant Engineering agreed to a contest with a cheaper competitive polish.

"A 55 gallon drum of each was applied to floor areas which were alike in every respect. Within a month, the competitive polish had been 'walked off' the floor. The LEGGE Polish functioned perfectly with no loss of slip-resistance or rich appearance for *more than 4 months!*

"As a result of this tremendous saving in labor and materials, LEGGE Polishes are now used exclusively throughout the plant."

This happened in one of the Midwest's largest industrial buildings. It could happen to you, too. Send for Free floor maintenance booklet today.

Walter G. LEGGE Co., Inc.

Dept. ND10, 101 Park Ave., New York 17, N. Y.
Branch offices in principal cities.
In Toronto—J. W. Turner Co.

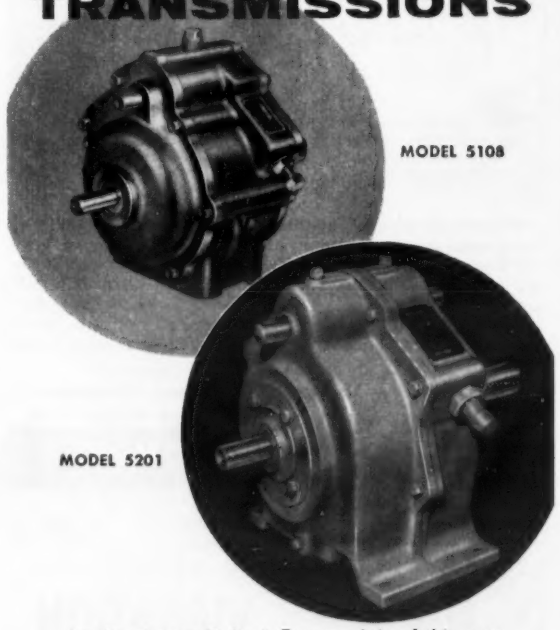
YOU'LL SAVE WHEN YOU SAY LEGGE TO BRAND ON LEGGE SYSTEM of Safety Floor Maintenance

▲ For more details circle NED-776 K8 on enclosed inquiry slip ▲

versatility plus with

S-N 4-1

REVERSING TRANSMISSIONS



Applications unlimited. Two models of this new type of reversing transmission offer the design engineer limitless possibilities in the design or redesign of agricultural, materials handling, machine tool or construction equipment. Combining forward—neutral—reverse—speed reduction in a single compact unit featuring smooth reversing, *under full load* if needed. These units are ideal for use with any equipment requiring power transmission up to 28 HP.

SPECIFICATIONS

MODEL 5108
Reduction ratio—3.75:1 both directions
Power transmission—up to 8 HP
Maximum input torque—320 pound inches
Maximum input speed—2000 RPM
Dimensions—9⅛" long, 10" wide, 10⅛" high

MODEL 5201
Reduction ratio—3.16:1 both directions
Power transmission—up to 28 HP
Maximum input torque—1000 pound inches
Maximum input speed—2000 RPM
Dimensions—11½" long, 12½" wide, 14⅛" high

For complete recommendations on specific applications write or call our engineering department. Literature gladly sent upon request.

SNOW-NABSTEDT

Transmission Engineers

FOR HALF A CENTURY

"MAKERS OF JOE'S GEARS"

THE SNOW-NABSTEDT GEAR CORP., HAMDEN, CONN.

50 YEARS OF BETTER GEARS

▲ For more details circle NED-777 K8 on enclosed inquiry slip ▲

Now available— SEL-LOK spring pins in beryllium copper

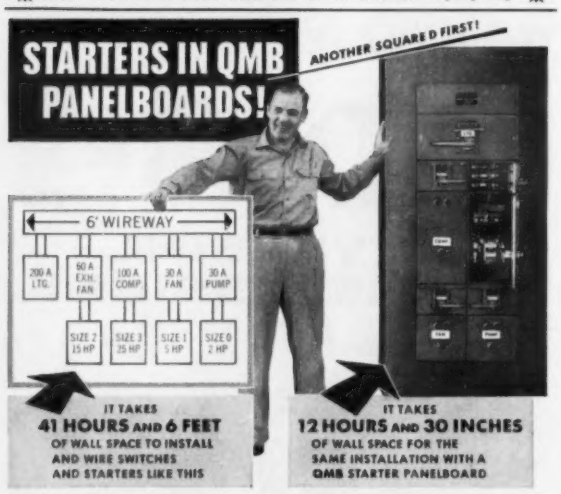
- Superior electrical properties
- Excellent corrosion resistance
- Fast, economical fastening

SEL-LOK spring pins made of beryllium copper give you the speed and economy of self-locking fastening, plus outstanding electrical characteristics. They have high conductivity, are nonsparking and nonmagnetic. In addition, they offer superior corrosion resistance. These properties are combined in a material having 60% the strength of carbon steel, more than ample for most applications. Sold by your authorized SPS distributor in sizes from 1/16 x 3/16 to ¼ x 3½ in. Write for Catalog Sheet 2376. (SEL-LOK spring pins also available in carbon or corrosion-resistant steel, sizes from 1/16 x 3/16 to ½ x 5 in. Request Bulletin 2331.) STANDARD PRESSED STEEL CO., Jenkintown 24, Pa.

sps Jenkintown • Pennsylvania

Standard Pressed Steel Co. • The Cleveland Cap Screw Co. • Columbia Steel Equipment Co. • National Machine Products Co. • Nutt-Shel Co. • SPS Western • Standco Canada Ltd. • Unbrako Socket Screw Co., Ltd.

▲ For more details circle NED-778 K8 on enclosed inquiry slip ▲



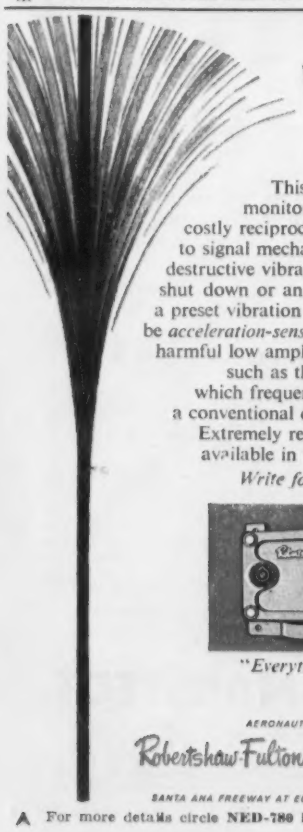
• Why mount separate starters and disconnect switches? It costs extra money. It wastes space. It takes a lot more time. QMB panelboards accommodate reversing and non-reversing starters, sizes 0 through 3. QMB switchboards and unit substations handle sizes 0 through 5. All are available factory-assembled and wired. Or get separate enclosures, starters, and plug-in switch units from your Square D distributor.

Write for Bulletin SD80 to Square D Company, 6060 Rivard Street, Detroit 11, Michigan

NOW ... ECaM PRODUCTS ARE A PART OF THE SQUARE D LINE

SQUARE D COMPANY

▲ For more details circle NED-779 K8 on enclosed inquiry slip ▲



END VIBRATION MENACE!

This unique new "vibration-level monitor" stands constant guard over costly reciprocating and rotating equipment to signal mechanical malfunction the instant destructive vibration starts. Machinery can be shut down or an audible alarm sounded once a preset vibration level is exceeded. Designed to be *acceleration-sensitive*, VIBRASWITCH can detect harmful low amplitude high frequency "noise", such as that caused by bearing failure, which frequently cannot be measured with a conventional displacement type vibrometer. Extremely reliable and maintenance-free—available in various models and housings.

Write for technical bulletin RF-586-D.

VIBRASWITCH® MALFUNCTION DETECTOR

"Everything's under control"

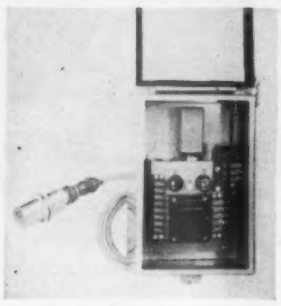
AERONAUTICAL AND INSTRUMENT DIVISION

Robertshaw-Fulton CONTROLS COMPANY

SANTA ANA FREEWAY AT EUCLID AVENUE • ANAHEIM, CALIFORNIA

▲ For more details circle NED-780 K8 on enclosed inquiry slip ▲

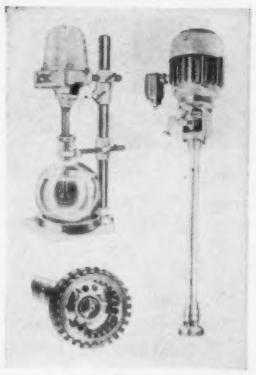
PROXIMITY LIMIT SWITCH actuated by ferrous objects



Incorporating a differential transformer transducer as a sensing device, the type 2782 electronic proximity limit switch will detect magnetic materials through an air gap up to 1 in. When the ferro - magnetic object passes within range of the sensor head, a signal is generated actuating the control relay. Sensing coil operates at ambient temperatures from −40 to 250° F. Its housing is sealed and potted for protection against corrosive atmospheres, humidity, and the presence of cutting oil. It is shielded from stray magnetic fields and is fungus-proof. Package includes sensor head, printed circuit control relay with set point adjustment, and a plug-in cable connector. Made by **ATC, Inc.**, Dept. 201, King of Prussia, Pa.

▲ For more details circle NED-781 K8 on enclosed inquiry slip ▲

HOMOGENIZER-DISPERSER UNITS process up to 5 and 100 gal



Mixing, dispersing, homogenizing, emulsifying, chemical reaction acceleration, defibration, and extraction are process operations performed by Polytron homogenizer and disperser units. The 1½-hp Model 45 TE has a milling head stator with a single row of 17 shearing blades and a rotor of 5 blades. Capacity is from ½ to 5 gal, depending on viscosity and characteristics of material being processed. It has free-running speeds of 13,000, 16,000, and 18,500 rpm. Model 115 TE with 3-hp motor has two rows of 28 shearing blades on the stator and 28 shearing blades on rotor along with one row of 3 pumping blades. Peripheral speed of rotor is 3600 fpm. This model will process 10 to 100 gal. Working parts on both models are stainless steel. Available from **Will Corp.**, Bronwill Scientific Div., 133 Gould St., Rochester 10, N. Y.

▲ For more details circle NED-782 K8 on enclosed inquiry slip ▲

Four-Wheel Hand Floor Trucks

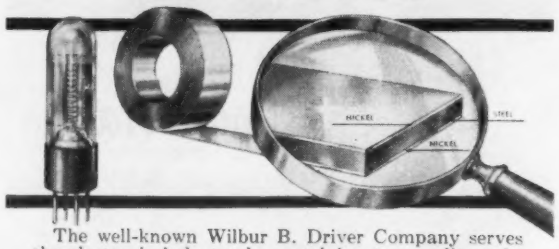
Lewis-Shepard Products, Inc.—Circular 29-D of 6 pages aids selection of four-wheel hand floor trucks. It opens into a chart which pictures 52 different trucks, including those with replaceable wooden decks, roller platforms, V-type decks, removable end and side racks, spring-loaded decks, and steel shelving.

▲ For more details circle NED-783 K8 on enclosed inquiry slip ▲

▲ For more details circle NED-784 K8 on enclosed inquiry slip ▲

General Plate Nifer

Helps Wilbur B. Driver Company Provide Customers with Improved Radio Tube Material at Lower Cost



The well-known Wilbur B. Driver Company serves the electronic industry by supplying top quality tube materials such as filament and grid alloys, carbonized pure nickel strip and carbonized G. P. NIFER strip.

G. P. NIFER strip is low carbon steel faced on both sides with dense, heavy claddings of Grade 330 Nickel. Wilbur B. Driver Company cold rolls G. P. NIFER in Sendzimer Mills to precise thicknesses for customers who fabricate radio tube parts. And, reports Wilbur B. Driver Company, NIFER not only saves on material cost, but produces better carbonization, resulting in superior radio tube performance.

General Plate is constantly developing new clad metals which save weight, cut costs, increase strength, conserve materials in critical supply, improve performance and offer other advantages not found in single metals. Why not write today for catalog GP-1 and get acquainted with the potentials of G.P. Clad Metals in your products?

You can profit by using General Plate Clad Metals.

METALS & CONTROLS CORPORATION
General Plate Division
1810 Forest Street
Attleboro, Mass.

▲ For more details circle NED-785 K8 on enclosed inquiry slip ▲

LOWEST COST HAMMERS YOU CAN BUY

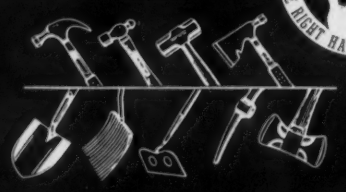
Famous ROCKET® hammers are not the "cheapest" – but they cost much less in the long run. What's more, they are the safest.

Shock-absorbing ROCKET handle is a chrome-plated tube of boron-alloy steel—strongest ever made. Carefully forged, tempered and hardened head is permanently locked to handle—can't loosen or fly off. Tough neoprene-fiber cushion grip soaks up shock, won't slip wet or dry or in gloved hand.

ROCKET nail hammers, rippers and ball peins are made in a variety of weights for all kinds of service. Each has patented ROCKET design that makes it outlast ordinary hammers many times. Over 1,000,000 in use! Contact your True Temper industrial distributor.

WRITE FOR FREE CATALOG "TOOLS FOR INDUSTRY"
True Temper
1623 Euclid Avenue
Cleveland 15, Ohio

INDUSTRIAL DISTRIBUTORS SERVING INDUSTRY ECONOMICALLY THE RIGHT HAND OF PRODUCTION



TRUE TEMPER
THE RIGHT TOOL FOR THE RIGHT JOB

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MARSHALLTOWN

ROTARY THROATLESS SHEARS

CAPACITIES
18 GAUGE TO ½"
CUTS ANY SIZE... ANY SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

Built for extra heavy duty use. High grade tool steel cutters.

Write Today for Details and Prices

MARSHALLTOWN MFG. COMPANY
MARSHALLTOWN 2, IOWA

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Ro-Flo COMPRESSORS

Smooth Operators

Here's a dramatic test to show just how smooth. A coin placed on end, atop the operating compressor, remains standing. You simply can't get smoother operation. It's all because of rotary motion and the elimination of reciprocating parts. And here's the result of this smooth operation: constant efficiency, compactness, low maintenance, with no costly foundations needed.

RATINGS — Choose from twelve sizes of two-stage *Ro-Flo* compressors, ranging from 250 to 1800 cfm at pressures from 60 to 125 pounds gauge. Single-stage units handle pressures up to 50 pounds gauge, volumes from 40 to 3000 cfm.

For complete information, ask for Bulletin 16B8244. Call your nearby A-C office or write Allis-Chalmers, Industrial Equipment Division, Milwaukee 1, Wisconsin.

Ro-Flo is an Allis-Chalmers trademark.

ALLIS-CHALMERS A-C A-5612

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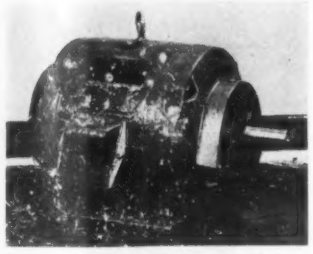
WEATHERPROOF AC MOTOR in ratings from 1 to 250 hp



Splashproof requirements of NEMA are exceeded by this weatherproof alternating current motor, developed for outdoor type applications where extreme moisture prevails. External parts of the open motor are cast iron and shaft openings are sealed by shaft cap and slinger. Insulation is completely nonhygroscopic. Rotor outer diameter and the stator inside diameter are coated with a rust inhibitor. Metermatic bearings meter the correct amount of a nonwashing grease from large reservoirs as needed. Watertight cast iron conduit box has a threaded outlet. All standard speeds and sizes from 1 to 250 hp are available. Made by **Reliance Electric & Engineering Co.**, Dept. SP, 24701 Euclid Ave., Cleveland 17, Ohio.

▲ For more details circle NED-790 K8 on enclosed inquiry slip ▲

ALL-WEATHER SEAL is waterproof, cold-heat resistant

Feutron felt has been developed as an all-weather seal, and is usable as a gasket, seal, or cushion where extreme conditions prevail. This weatherproof, cold and heat resistant felt withstands temperatures from —60 to 325° F, is nonaging, has very low compression, and no plastic creep. It weighs 24 to 26 oz per sq yd, and is available in 72-in. standard width and 0.165 to 0.21 in. thick. Made by **American Felt Co.**, 80 Glenville Rd., Glenville, Conn.

▲ For more details circle NED-791 K8 on enclosed inquiry slip ▲

CURRENT CHECKING SET includes V-O-M, clamp-on ammeter

Rapid, easy testing of current - carrying circuits can be made with the Model 100 Volt-Ohm-Milliammeter and clamp-on ammeter set. The Model 310 hand - size V-O-M checks alternating and direct current voltages (dc at 20,000 ohms per volt), ohms, megohms, microamperes, and milliamperes. Meter has a bar-ring self-shielded magnet for checking strong magnetic fields. The V-O-M converts into a clamp-on ammeter by addition of Model 10 adapter which attaches to top of tester. It checks line loads instantly, without breaking circuit or interrupting work. Set also includes a line separator to divide two-conductor cords and a leather carrying case. Made by **Triplett Electrical Instrument Co.**, 10 Harmon Rd., Bluffton, Ohio.

▲ For more details circle NED-792 K8 on enclosed inquiry slip ▲

ABELL-HOWE JIB CRANES

8 TYPES

Eight *standard* types that is—which means you can get exactly the jib crane best suited for your particular jobs... at lowest possible cost!

Tell us your requirements and we'll make suggestions for most economical application!

Ask for CATALOG J-114

ABELL-HOWE COMPANY 7747 W. VAN BUREN ST. FOREST PARK, ILL.

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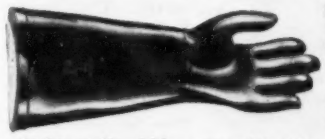
"Extracoated" Edmont Gloves Wear 20% Longer

Neox No. 924 ... one of 8 styles

FLEXIBLE NEOPRENE COATED: Edmont's exclusive reinforced DuPont neoprene is as flexible as plastic and far tougher than ordinary neoprene. Extracoated for best all 'round resistance to solvents, caustics, oil, heat and abrasion. New, comfortable pattern with wing thumb and curved, pre-flexed fingers.



Redmont No. 938 ... one of 6 styles

HEAVY DUTY NEOPRENE PROTECTION is provided by Extracoating of reinforced neoprene. Job-fitted for handling in presence of oil, solvents, caustics, acids and heat. Wing thumb, curved fingers, seamless palm for maximum comfort.

Grab-it No. 60W ... one of 8 styles

POSITIVE NON-SLIP GRIP makes Grab-it the safest general handling glove on the market. Extracoated with tough natural rubber, welded to strong fabric. Outwears ordinary leather; outwears a dozen or more regular canvas gloves. Excellent resistance to cutting and abrasion.

Snorkel No. 404 ... one of 4 styles

SUPER-FLEXIBLE LIQUID-PROOF GLOVES with sure, non-slip grip for wet or dry handling. Two-piece jersey liner. Extracoated with Edmont vinyl; has excellent resistance to oils, abrasion, many solvents. Wing thumb; curved, pre-flexed fingers and seamless palm for greatest working ease.

Werx No. 151 ... one of 4 styles

OUTWEARS CANVAS 5 to 1 and frequently outwears expensive goatskin. Special vinyl-impregnated fabric of this Werx glove gives excellent grip and dexterity, lets hands breathe. Lint-free and washable. Ideal for inspection of small parts, shipping and receiving.

Monkey Grip No. 36 ... one of 8 styles

JOB-FITTED FOR ABRASIVE WORK. Monkey Grip is Extracoated with Edmont's own tough vinyl plastic. Quality of the plastic is always uniform. Perfect hand-fitting pattern with wing thumb and curved, pre-flexed fingers. Also available with triple-thick coated palm.

Grappler No. 363 ... one of 5 styles

EXCELLENT WET-GRIP CHARACTERISTICS. Extracoated with Edmont's exclusive heavy duty Durox. Outwears ordinary plastic coatings up to 50%. Grappler resists abrasion, snagging, many solvents. Wing thumb, curved, pre-flexed fingers provide comfort and ease of handling.

FREE TEST OFFER TO LISTED FIRMS: Tell us your operation, material handled, temperature condition. We will recommend the correct glove and supply samples for on-the-job testing.

EDMONT MANUFACTURING COMPANY
1240 Walnut Street, Coshocton, Ohio
In Canada, write MSA, Toronto

Edmont

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FREE BOOK

Shows You HOW TO CUT INDUSTRIAL WASTE DISPOSAL COSTS

Here's one of the most comprehensive books ever published on the subject of industrial waste disposal. You'll find its pages packed with money-saving information . . . discussions and comparisons of equipment and methods. Among the many subjects covered are:

HOW TO DETERMINE YOUR COSTS . . .
An explanation of a simple, step-by-step cost-finding survey you can conduct in your own plant.

INDUSTRY AVERAGES . . .
For comparison with your costs, there is a table of average per-cubic-yard costs by types of industry.

CASE HISTORIES . . .
Actual dollar and cents savings effected by six companies and how they did it. Also included in the book are many helpful hints on movement, storage, handling and eventual disposal.

DEMPSTER BROTHERS, Dept. NE-10
Knoxville 17, Tenn.

Write Today!

Photo above shows Dempster-Dumpster Container on casters stationed at a point of waste accumulation.

Manufactured By Dempster Brothers, Inc.

THE DEMPSTER DUMPSTER SYSTEM

▲ For more details circle NED-789 K8 on enclosed inquiry slip ▲

NEW FOSTORIA OPTA-VUE*

MAGNIFIES AND ILLUMINATES FOR QUICK, EASY PRECISION SEEING

MODEL D $40 COMPLETE

Other models available for bench or machine mounting. Write for catalog.

Provides Binocular vision for fine assembly, inspection, testing and all precision visual tasks.

6" x 6" optically ground Lucite lens. 36 sq. in. viewing area, free from distortion.

High light transmission with two 4W fluorescent tube Localite.

Lens and light independently adjustable. Frictional collar disc joints give flexibility for any position.

½" steel tubular stand finished in Hammerine Metallic Silver. Rubber feet. Size 12" x 10" x 9" high.

A sensational aid for increasing production speed and accuracy. Already in big demand throughout industry for easy viewing of tiniest work details. Many profitable applications for your plant.

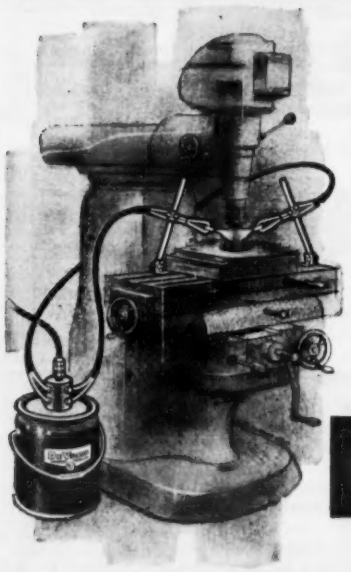
* Trade Mark

Available at Electrical Wholesalers and Scientific Supply Houses

THE FOSTORIA PRESSED STEEL CORPORATION
FOSTORIA, OHIO

▲ For more details circle NED-795 K8 on enclosed inquiry slip ▲

$40 mist-spray cooling outfit DOUBLES TOOL LIFE



Now—double tool life, hold closer tolerances with Multi-Mister, De Vilbiss, new $40* mist-spray cooling outfit. Call your DeVilbiss man for a demonstration, or write for Bulletin BC 1025.

*Price for complete outfit CS-511: 1-gallon tank, suction tube, header assembly, nylon tube, and one spray nozzle assembly with mounting bracket.

FOR BETTER SERVICE, BUY DEVILBISS

THE DEVILBISS COMPANY, Toledo 1, Ohio

Branch Offices in Principal Cities

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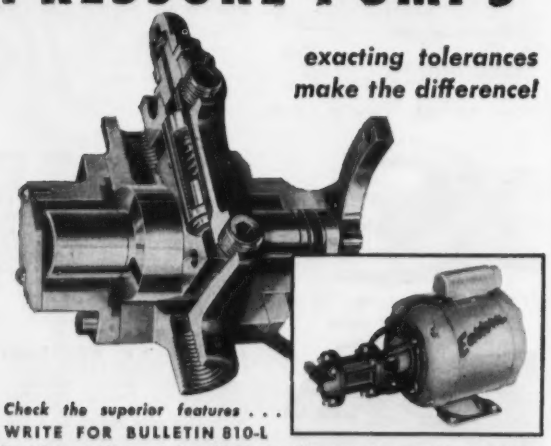
EASTERN POSITIVE PRESSURE PUMPS

exacting tolerances make the difference!



Check the superior features . . .
WRITE FOR BULLETIN 810-L

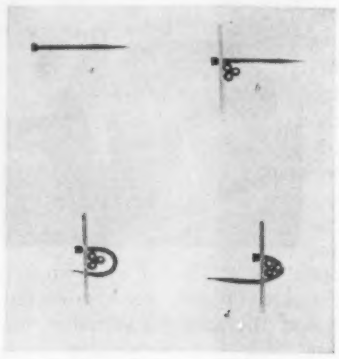
Precision machine work to split thousandths guarantees continued full output after thousands of hours of operation. No metal to metal contact makes them suitable for pumping small volumes of water or water-type solutions against relatively high pressures.
GW Series, in bronze, for volumes up to 1 GPM at pressures up to 200 P.S.I. VW Series, in bronze or Stainless Steel, for volumes up to 5½ GPM at pressures up to 60 P.S.I.

Close coupling gives greater strength and minimizes size and weight. Pump shafts in both gear and rotary vane pump operate in composition bearings and are driven through a splined shaft.

Eastern INDUSTRIES, INC.
100 SKIFF ST. • HAMDEN, CONN.

▲ For more details circle NED-797 K8 on enclosed inquiry slip ▲

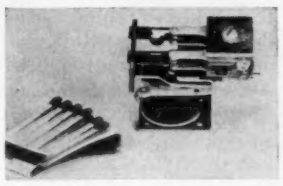
RUBBER "MOUSE TAILS" secure wire bundles to chassis



Wire bundles can be secured to the chassis of electronic instrumentation by means of these composition rubber "mouse tails," one of which is shown in photo quadrant (a). Tapered end is inserted through a hole in the chassis (b) then looped over the wire bundle as in (c) and reinserted in an adjacent hole. Tapered end is pulled tight as shown in (d). When tension is released, rubber expands to fill hole and hold the wire bundle securely in place. Excess end of mouse tail is clipped off flush with chassis. Developed by Boeing Airplane Co., mouse tails are made by **Rubber Teck Co.**, 19115 S. Hamilton Ave., Gardena, Calif.

▲ For more details circle NED-798 K8 on enclosed inquiry slip ▲

ELECTRICAL RELAYS 10 and 15-amp units offered



Suitable for a large percentage of all nonmilitary applications, two small electrical relays have contact ratings of 10 and 15 amp, respectively. Former is a general purpose vertical coil type which mounts in a 1½-sq in. space. Coil is rated 115 v ac continuous. This relay is available in single to four-pole circuit arrangement and in any combination. Second relay with 15-amp, ½-hp rated contacts also has coil rating of 115 v ac. This single-pole, single or double-throw unit has a snap-action switch. High-grade steel used in the magnetic circuit of these relays shows no evidence of residual magnetism. Crimp in armature allows reduced relay gap. Made by **Robertshaw-Fulton Controls Co.**, Acro Div., Columbus 16, Ohio.

▲ For more details circle NED-799 K8 on enclosed inquiry slip ▲

DUAL PRESET COUNTER operates at up to 40,000 counts/sec

This dual preset counter-controller is a direct-reading electronic counter which provides output information in the form of pulses and relay closures at any two preselected counts within its capacity. It is designed to solve control problems such as motor overspeed, shearing to length, high speed coil winding, weighing, sorting, packaging, metal forming, computer programming, and variable pulse generation. Unit operates at up to 40,000 counts per second. It obtains input information from photocells, tachometers, flow and pressure pickups, switch closures, and similar transducers. Unusual digit circuitry extends apparent range of the instrument. Made by **Computer-Measurements Corp.**, 5528 Vineland Ave., North Hollywood 7, Calif.

▲ For more details circle NED-800 K8 on enclosed inquiry slip ▲

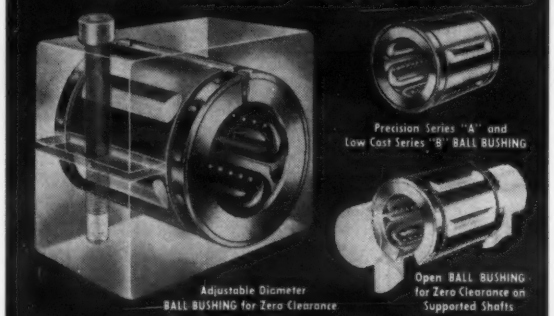
LIQUID RATIO REGULATOR proportions and blends automatically

Type R liquid ratio regulator and blender automatically proportions and blends a secondary stream to the measured flow of an uncontrolled primary stream, despite line pressure variations. Flow measurement, ratio control, and actual blending are all accomplished with the single, self-contained regulator which has only two moving parts. It operates with minimum pressure difference of 5 psi and requires no outside source of power. Accuracy is maintained throughout a 5:1 ratio range and a 2:1 primary flow range. Units are made of carbon steel, Type 316 stainless steel, and special alloys to handle a variety of liquids. Made by **W. A. Kates Co.**, 432 Waukegan Rd., Deerfield, Ill.

▲ For more details circle NED-801 K8 on enclosed inquiry slip ▲

NOW! *Adjustable Diameter and Open*

THOMSON BALL BUSHINGS



The BALL Bearing for *all* your **LINEAR MOTIONS**

LOW FRICTION • ZERO SHAKE OR PLAY
ELIMINATE BINDING AND CHATTER
SOLVE SLIDING LUBRICATION PROBLEMS
LONG LIFE • LASTING ALIGNMENT

The various types cover a shaft diameter range of ¼" to 4". Small sizes available in Stainless Steel. Write for literature and name of our representative in your city.

THOMSON INDUSTRIES, Inc.
Dept. C, MANHASSET, NEW YORK

Also manufacturers of NYLINED Bearings
. . . Sleeve Bearings of DuPont NYLON

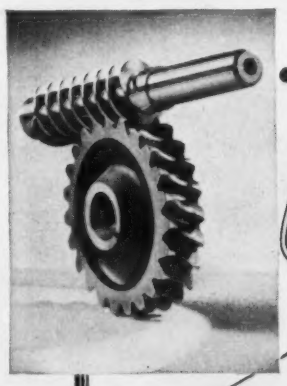
▲ For more details circle NED-802 K8 on enclosed inquiry slip ▲

FULL CONE—HOLLOW CONE—FLAT SPRAY

Spraco has the most complete line of nozzles available anywhere — **IN STOCK.** Capacities range from ⅛ pint/min. to 4000 gal./min. Bronze, cast iron, and stainless steel. Write for our nozzle catalog.

SPRAY ENGINEERING CO., *106 Cambridge St., Burlington, Mass.*

▲ For more details circle NED-803 K8 on enclosed inquiry slip ▲



ABART Gears

ARE PRECISION-CUT TO YOUR SPECIFICATIONS

Any gear material . . . any quantity. 96 pitch to 5/7 D.P. ¼" P.D. to 18" P.D.

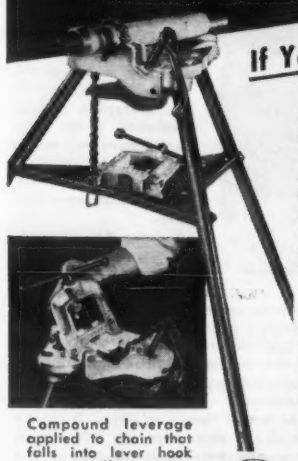
Send B/P and specs or sample for quotation. Write for Abart Gear Bulletin.

There's an Abart Speed Reducer for your need. Over 75 types and sizes from stock. Request Speed Reducer Catalog.

ABART GEAR and MACHINE CO.
4831 WEST 16th STREET • CHICAGO 50, ILLINOIS

▲ For more details circle NED-804 K8 on enclosed inquiry slip ▲

TOLEDO'S NEW VISE STANDS



If You Want the Best

The Vise With Legs Easy To Carry — Set Up Won't Collapse

A vise stand with vise, legs and tray in one unit—unmatched for quality and durability. Lightweight, sturdy construction means easy carrying—quick set up. Steel tray prevents folding when in use. You'll like the large base with 3 pipe benders located over rear leg—preventing tipping when bending pipe—plenty of tool slots and handy ceiling brace screw. Replaceable jaws—rubber grommets in feet eliminate creeping. Two Models—No. 7C with Chain Vise ⅛" to 5", No. 7Y with Yoke Vise ⅛" to 2½".

Compound leverage applied to chain that falls into lever hook automatically requires minimum of turns on screw. Large tightening handle on top—no bruised knuckles.

Quality Checked

BUILDERS OF THE WORLD'S FINEST PIPE TOOLS
TOLEDO
PIPE THREADERS • PIPE WRENCHES • PIPE MACHINES

THE TOLEDO PIPE THREADING MACHINE COMPANY TOLEDO 4, OHIO

▲ For more details circle NED-805 K8 on enclosed inquiry slip ▲

TECHNITE® POWER HACK SAW BLADES

stay hard, sharp and accurate

cut

after cut

after cut

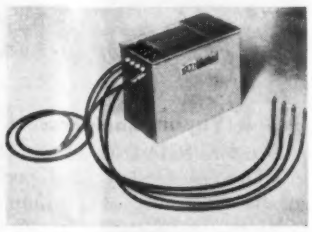
See Your Capewell Distributor

CAPEWELL

THE CAPEWELL MFG. CO.
HARTFORD 2, CONN.

▲ For more details circle NED-806 K8 on enclosed inquiry slip ▲

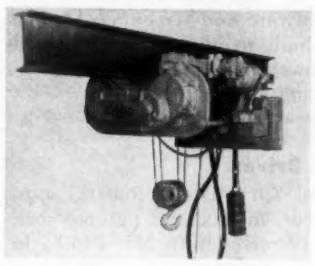
MIST COOLANT GENERATOR
1 and 4-gal sizes, up to 4 outlets



Compact, all-in-one mist coolant generator is offered in a 1-gal size with one or two mist outlets, and a 4-gal size with one to four outlets. Flexible steel mist nozzles can be flexed in a fixed position to simplify mist application directly onto cutting edges of tools. When chips interfere, coolant mist can be applied from underneath. The portable unit can be moved from machine to machine and requires only air line connection for power. Made by **Kett Tool Co.**, Dept. NE, 5055 Madison Rd., Cincinnati 27, Ohio.

▲ For more details circle NED-807 K8 on enclosed inquiry slip ▲

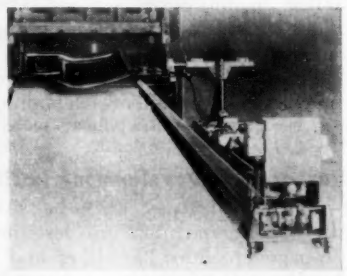
ELECTRIC HOIST
heavy duty, low headroom unit



Lifting capacities from 1 to 15 tons are available in the Lo-Hed heavy duty electric wire rope hoist with four wheel motor driven trolley. It runs on monorail track or standard I-beam. The trolley is available on all Class A, B, H, and J Lo-Hed single speed, two speed, or variable speed hoists. All voltages and frequencies of alternating and direct current are offered. All have pushbutton control. Made by **American Engineering Co.**, Dept. H-172-A, Wheatsheaf Lane & Sepviva Street, Philadelphia 37, Pa.

▲ For more details circle NED-808 K8 on enclosed inquiry slip ▲

PART & SCRAP EXTRACTOR
removes pieces from machines



Portable, completely self-contained Press-Hand extractor can be used to lead, transfer, or remove parts, scrap, and other materials from any type press, forging press, or die casting machine with the use of a standard jaw. With a shovel unloader it can be used to strip parts from the top half of a die using a knock-out at the top of the press stroke. Extractors are made in a range of sizes and adapt to any specific application. Made by **Die & Automation, Inc.**, Dept. D, 5353 Dixie Highway, Hamilton, Ohio.

▲ For more details circle NED-809 K8 on enclosed inquiry slip ▲

MEASURE AC and DC WITH ONE AMMETER

without electrical connections

TONG TEST is the only instrument of its type that measures both alternating and direct current. Press trigger and snap tongs around the electrical conductor for an instant reading, without shutting down equipment. Interchangeable ranges up to 1000 amperes; impossible to read the wrong scale.

Rugged and dependable, safe and accurate. No coils or wires to burn out. Thousands of TONG TEST AMMETERS in use after more than 25 years of active service. Five types available for conductors up to 3⅞" diameter, or bus bars up to 4½" x ½".

Write today for Catalog ND-400

COLUMBIA

COLUMBIA ELECTRIC MFG. CO.
4525 Hamilton Ave.
CLEVELAND 14, OHIO

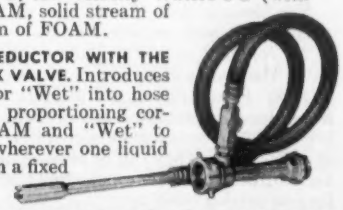
▲ For more details circle NED-810 K8 on enclosed inquiry slip ▲

Rockwood DOUBLE-STRENGTH Foam Smothers 'Em All!

Gasoline • Fuel Oil
Jet Fuel • Crude Oils
and other
Petroleum Derivative Fires

Team DOUBLE-STRENGTH Foam with these two Rockwood fire killers

TYPE SG-60 NOZZLE. A true all-purpose nozzle that fights fire 5 ways. It discharges high velocity WaterFOG, low velocity WaterFOG (with applicator), FogFOAM, solid stream of water or solid stream of FOAM.



FOAM AND "WET" EDUCTOR WITH THE FW METERING-CHECK VALVE. Introduces Rockwood FOAM or "Wet" into hose lines, automatically proportioning correct amount of FOAM and "Wet" to water. Also usable wherever one liquid is fed into another on a fixed percentage basis.

ROCKWOOD SPRINKLER COMPANY

Engineers Water . . . to Cut Fire Losses

Portable Fire Protection Division
1364 HARLOW STREET, WORCESTER 5, MASSACHUSETTS

▲ For more details circle NED-811 K8 on enclosed inquiry slip ▲

Rotary®

OILDRAULIC® POWER

Cuts the cost of lifting heavy loads

Write for catalogs
ROTARY LIFT CO., 1171 KENTUCKY, MEMPHIS, TENN.

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Now . . . improved Sealtite E.F.

Sealtite type E.F.* – the original flexible, liquid-tight conduit, first to meet J.I.C. requirements – is now better than ever. New design has made it stronger, tougher, more durable in service . . . easier to install. Heavier extruded PVC jacket offers greater resistance to abrasion, cutting and tearing . . . greater oil resistance . . . greater holding power for fittings. It is more flexible – permits smaller bending diameters. New convenient markings save time, prevent waste. Length is indicated by arrows at 1-foot intervals. Trade size in inches is shown on cover. In black or gray. For free sample and more information, write: The American Brass Company, American Metal Hose Division, Waterbury 20, Conn.

*Pat. Applied For 57180 Rev.

SEALTITE® flexible, liquid-tight conduit

an ANACONDA® product

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NEW METAL EDGE FILTER CATALOG...

For filtration from 25 microns up with almost no maintenance at all, you can select Purolator metal edge filters made of all common metals and alloys with flows from 1 to 1000 GPM. They will withstand temperature extremes from −260° F. to 1200° F. and differential pressure to 125 PSI. Their metal edge elements provide a thin-walled, rugged medium with a lower initial pressure drop, higher flow and complete utilization of surface area. They can be cleaned almost indefinitely – with knife blades (manual or motorized), or by backwashing. Write for *free* catalog today to:

PUROLATOR PRODUCTS, INC.
RAHWAY, NEW JERSEY AND TORONTO, CANADA

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Cost-cutting FACTS & IDEAS worth thousands of dollars!

Here . . . at your fingertips . . . are the dollar-and-space-saving facts about handling unit loads in narrow aisles. Learn how you can store more goods in your present warehouse. Increase capacity as much as 50% . . . make new floor space more productive with narrow aisles. This new 24 page reference book contains complete specifications of Raymond hydraulic and electric pallet handling trucks for every size and type of operation. Profusely illustrated. Send for your FREE copy today!

RAYMOND

The RAYMOND CORPORATION
4173 Madison St., Greene, N. Y.

FREE . . . "Pallet Handling in Narrow RAYMOND Aisles"

NAME TITLE
COMPANY
STREET
CITY STATE

▲ For more details circle NED-815 K8 on enclosed inquiry slip ▲

New Literature and Catalogs

Gas & Vapor Compressors

Dresser Industries, Inc., Roots-Connersville Blower Div. — Design and performance data to aid in the selection of medium-pressure Spiraxial compressors in a wide range of process and other industries are given in 4-page Bulletin LAH-158. Capacities range from 1000 to 12,000 cfm for pressures up to 15 psig. With multistage installations, these capacities can be increased infinitely.

▲ For more details circle NED-816 K8 on enclosed inquiry slip ▲

Aluminum Windows & Screens

Ceco Steel Products Corp.—Aluminum windows in commercial and monumental double-hung series, projected series, and heavy awning styles are cataloged in 24-page bulletin 6013-E. Specifications and installation details are given for the three groups as well as for accompanying hardware and screening. Double-hung units are custom built to any size or wall condition. Projected windows come in various sizes for applications requiring gang operation.

▲ For more details circle NED-817 K8 on enclosed inquiry slip ▲

Automatic Set Screw Driver

Standard Pressed Steel Co.—The Setomatic automatic set-screw driver feeds, inserts, and tightens socket set screws ranging in diameter from No. 4 to 3/8 in. and lengths up to 3/4 in. Speeds up to 2500 installations per hour are possible. 4-page bulletin 2302 reviews the Setomatic and provides close-up photos of the feed and drive mechanisms. Basic specifications and major features are given.

▲ For more details circle NED-818 K8 on enclosed inquiry slip ▲

Improving Office Efficiency

Manpower, Inc.—"100 Ways to Improve Efficiency —Save Money in Your Office" is title of 12-page booklet which considers various office expenses entailed in business operation and points out proper planning procedures to effect improvements. Discussion covers budgets, physical office, storage, forms, selection and promotion, employee training, office equipment, mail department, telephone service, and filing.

▲ For more details circle NED-819 K8 on enclosed inquiry slip ▲

Research & Development Facilities

U. S. Industries, Inc.—Facilities of this multiple-division organization are described and illustrated in 36-page brochure "Facilities and Technical Personnel for Research, Development and Manufacturing." Divisions range from missile instrumentation to heavy metalforming press equipment. Included is the Kett Technical Center, a completely equipped research and development facility.

▲ For more details circle NED-820 K8 on enclosed inquiry slip ▲

Hydraulic Press Brakes

Cleveland Crane & Engineering Co.—Positive overload protection, ram reversible at any point, stroke adjustment for any length, fast ram approach and return with slow-speed pressing, and constant power during stroke are among advantages provided by Steelweld hydraulic press brakes. 8-page Catalog 2024A presents construction details and specifications of these machines.

▲ For more details circle NED-821 K8 on enclosed inquiry slip ▲

W-Type Gear Drives

Pfaudler Co.—20-page Instruction Manual covers installation, operation, and maintenance of standard 2.5, 3, 4, and 5 W-type gear drives for processing applications. These compact, quiet operating units adapt to a variety of agitated reactions. They are furnished with static-resistant belts and may be combined to produce the necessary agitation speed. Variable pitch sheaves give agitator speeds from 600/120 to 100/20.

▲ For more details circle NED-822 K8 on enclosed inquiry slip ▲

Industrial Hand Tools

Complete 156-page guide to wrenches and hand tools for production and maintenance catalogs full information on a complete line. How to select and use power-driven nut runners and impact wrenches is explained. Data are given on wrenches, sockets, pliers, screwdrivers, chisels, and hundreds of other hand tools which are used in industry. Catalog is available free to purchasing agents, engineers, and production and maintenance officials who write to Snap-On Tools Corp., 8028 28th Ave., Kenosha, Wis.

▲ For more details circle NED-823 K8 on enclosed inquiry slip ▲

SILVER PLATING "ON THE JOB" WITH POWDER

Cool-Amp Silver Plating Powder deposits a genuine coat of silver that will not peel off, and will provide lasting protection against oxidation. It has been used extensively and is accepted as equal to electroplating for bolted and stationary contacts.

Reduces Maintenance
Saves Electricity

Cool-Amp minimizes overheating and provides cool maximum conductivity for your copper, brass or bronze contacts. Used on all current carrying connections, Cool-Amp silver plating assures long life and low maintenance and will prevent series of losses from oxidation that are too small to create noticeable heat but still accumulate into major power loss. Apply to fuse clips and blades to reduce overheating.

Cool-Amp contains no cyanide and is simple to apply. It can be used by any number of people at the same time ON THE JOB in underground vaults, sub-stations and hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

One pound will silver plate approximately 6,000 square inches.

$13.50 PER POUND SHIPPED PREPAID
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

The COOL-AMP Co.
Dept. ED. 8603 S.W. 17th Avenue, Portland 19, Oregon

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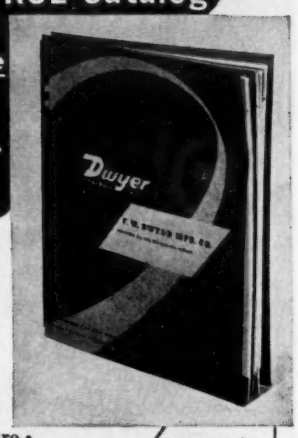
NEW 72-page GAGE and CONTROL Catalog

..tells where to use them..

..WHY and HOW!



Illustrates instruments and gages...*diagrams* their installation and on-the-job use... *charts* valuable performance data.

For the efficient measurement of combustion • draft • pressure • flow • vacuum • co_2 • smoke • velocity • static pressure • pressure differential • temperature • and others.

Write for your free copy of this valuable book today!

Dwyer CONTROLS GAGES

F. W. DWYER MFG. CO.
P.O. BOX 373-Q, MICHIGAN CITY, INDIANA

▲ For more details circle NED-825 K8 on enclosed inquiry slip ▲

T-J spacemaker cylinder
Quality Engineered
to give quality results
with Extras... at No Extra Cost!

METAL PISTON ROD SCRAPER . . . Standard at No Extra Cost!
NEW "SUPER" CUSHION FOR AIR . . . Standard at No Extra Cost!
CHROME PLATED CYLINDER BORES AND PISTON RODS . . . Standard at No Extra Cost!
ONE PIECE PISTON . . . Standard at No Extra Cost!
NEW "SELF-ALIGNING" MASTER CUSHION FOR HYDRAULIC USE . . . Standard at No Extra Cost!
NO TIE-RODS TO STRETCH . . . Standard at No Extra Cost!
STREAMLINED DESIGN . . . Oil Pressure to 750 P.S.I.—air to 200 P.S.I. Standard at No Extra Cost!
FORGED SOLID STEEL HEADS . . . Standard at No Extra Cost!

Write for catalog SM 56-2 with complete engineering details. The Tomkins-Johnson Co., Jackson, Mich.

TJ TOMKINS-JOHNSON
MANUFACTURERS OF AIR AND HYDRAULIC CYLINDERS CUTTERS CLINCHERS

▲ For more details circle NED-826 K8 on enclosed inquiry slip ▲

WELDING SCREENS

PROTECT
MERCHANDISE AND PERSONNEL

Work needn't stop for welding with these safe, lightweight, portable screens. Shield merchandise and other workers from welding.

- Treated Canvas, Asbestos or Neoprene
- Flame, Water, Weather and Mildew Resistant
- Nominal Cost—Based on Size
- Hinged for Portability
- Eyelets Hold Curtains in Place
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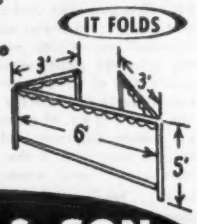


Protect merchandise with Folding Loading Dock Covers. Stock sizes and specials.

A. MAMAUX & SON
120 BOULEVARD OF THE ALLIES
PITTSBURGH 22, PA. PHONE COURT 1-3500

Tarpaulins . . . 100,000 Square Feet in Stock

▲ For more details circle NED-827 K8 on enclosed inquiry slip ▲

Install PLATECOIL heat transfer units and save up to 50% on installation and maintenance costs. With "spare" PLATECOIL units, you can eliminate down time needed for cleaning pipe coils. Simple connections and "quick-change" hangers make changing PLATECOIL units fast and easy. Use "spare" while other units are being cleaned. Cleaning is easier, too, with PLATECOIL. Wide selection of sizes, styles and metals to fit your needs.

SEND FOR FREE BULLETIN P57.

TRANTER MANUFACTURING INC.
LANSING MICHIGAN

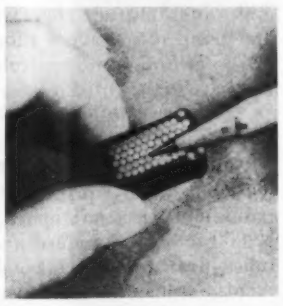
PLATECOIL® DIVISION

▲ For more details circle NED-828 K8 on enclosed inquiry slip ▲

▲ For more details circle NED-829 K8 on enclosed inquiry slip ▲

New Processes and Materials

POTTING COMPOUNDS
use low volatility curing agents



Epoxy resin base line of potting formulations use hexahydrophthalic anhydride or Methyl Natic Anhydride as the curing agent, as it has low volatility at elevated temperatures. The anhydride-cured compounds have long pot life, in some cases up to 1 week. Curing is slow and readily controlled. Addition of tertiary amines reduces the cure time from as high as 8 to 16 hr to as little as 15 min at 150° F. Compounds are available in various colors, and with or without inert fillers and powdered metals, for potting, encapsulating, and impregnating electrical and electronic components. Made by **Mitchell-Rand Mfg. Corp.**, 50 Murray, New York, N. Y.

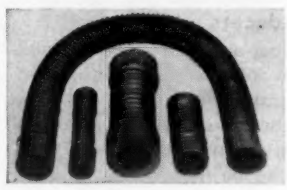
▲ For more details circle NED-830 K8 on enclosed inquiry slip ▲

STENCIL INK
usable even on oily surfaces

Because it can penetrate grease or oil film on surfaces of parts or materials, Type N-900 stencilling ink assures clear, sharp, durable markings without preliminary cleaning. It has uniform color and is applicable by brush or spray. It adheres to the metal, dries instantly, and is waterproof as well as resistant to most solvents. Made by **Speedry Products, Inc.**, Dept. NED, Box 97, Richmond Hill 18, N. Y.

▲ For more details circle NED-831 K8 on enclosed inquiry slip ▲

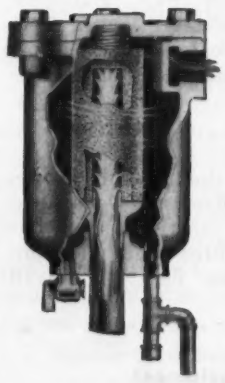
NEOPRENE RADIATOR HOSE
steel spring reinforces body



Tempered steel spring incorporated in the tough, neoprene body of these radiator hoses allows sharp bends or curves without danger of collapsing. Special heavy-duty types withstand pressures up to 200 psi. Any type clamp can be used to install these hoses on cars, trucks, and tractors. Lengths are available from 5 to 60 in., in diameters to suit the various makes of vehicles and motors. Special sizes can also be made. Hose resists antifreeze, petroleum bases, and rust inhibitors. Made by **Wisconsin Rubber Products Co.**, Dept. A, Union Grove, Wis.

▲ For more details circle NED-832 K8 on enclosed inquiry slip ▲

ADAMS PORO-STONE AIR FILTER,
designed to remove oil, water and foreign matter from compressed air lines with minimum pressure drop.



The R. P. Adams Poro-Stone air filter is engineered to efficiently remove entrained oil, water and pipe scale from compressed air lines. Liquid droplets and solids being carried by the gas stream are first removed by centrifugal action in an annular chamber. Secondary filtration is achieved by passing the air or gas stream through a poro-stone unit. An automatic trap can be provided to discharge the residue from the cyclone chamber.

At rated capacity the filters operate at a maximum pressure drop of only ½ lb., thus insuring delivery of line pressure to the point of consumption.

The units require virtually no service or maintenance—thereby insuring continued trouble-free, low cost performance.

ADAMS Poro-Stone air filters are available from stock in sizes to suit your needs. For further information, write today for Bulletin 117, R. P. Adams Co., Inc., 227 East Park Drive, Buffalo 17, New York. *Advt.*

▲ For more details circle NED-833 K8 on enclosed inquiry slip ▲

FREE LUBRICATION SURVEY OF YOUR PLANT

Eliminate bearing failures like this
(due to haphazard lubrication)

An experienced Farval engineer will come into your plant and conduct a Free Lubrication Survey of your equipment. This Farval Survey will tell you:

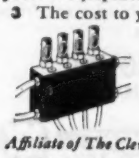
1 The most economical method of lubrication for each piece of your equipment.

2 Whether centralized lubrication can be installed on your present equipment.

3 The cost to you of a Farval centralized system of lubrication on any or all pieces of machinery.

4 How centralized lubrication can increase bearing life, save you maintenance costs and increase production.

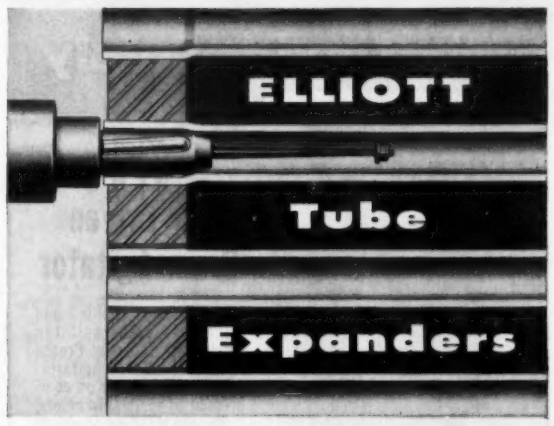
These are facts that can save you thousands of dollars! A Farval engineer is ready to serve you promptly. This is a Free Survey—no obligation. Write today!



THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio

Affiliate of The Cleveland Worm and Gear Company, Industrial Worm Gearing

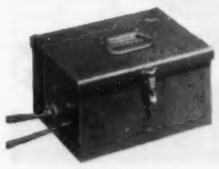
▲ For more details circle NED-834 K8 on enclosed inquiry slip ▲



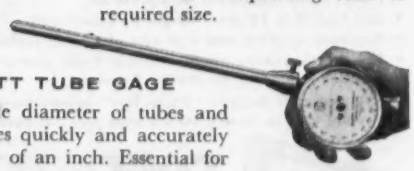
with ELECTRICAL CONTROLS for tight, uniform tube joints

Assures air- or water-tight joint between tube and tube sheet by use of rotating, parallel self-feeding rolls. Elliott expanders have adjustable ball-bearing thrust collars, and rolls having a radius on front and back ends. Available in 4 types, for tubes ¼″ through 3″, 14 gage.

with ELLIOTT electrical controls, your tube expanding job becomes a precision operation



A *torque limiting device* takes guesswork out of tube rolling. Designed for use with any standard tapping motor, it's compact, easy to operate, and reduces chance of tube failure and tube sheet distortion. *Voltage Balancer* eliminates need for voltage regulator, *Torque Control Knob* assures expanding tube to required size.



THE ELLIOTT TUBE GAGE
Measures inside diameter of tubes and tube sheet holes quickly and accurately in thousandths of an inch. Essential for setting tube expander controls.

Whatever your requirements, Elliott has the tube cleaning, maintenance and expander equipment. Contact your Elliott District Office or write Elliott Company, Lagonda Division, Springfield, Ohio.

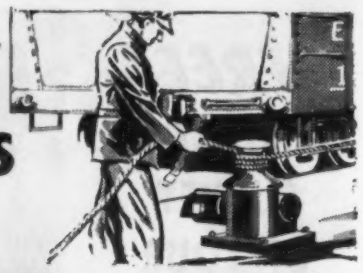
Y7-2A

ELLIOTT Company
Headquarters for Tube Cleaners and Expanders

STEAM TURBINES • MOTORS • GENERATORS • DEAERATING HEATERS • EJECTORS • CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS

▲ For more details circle NED-835 K8 on enclosed inquiry slip ▲

Webster CAR MOVERS



A TIME AND MONEY-SAVER • •

One-man operation. Always ready, always safe. The capstans on WEBSTER Car Pullers are designed to give long life to the ropes, and provide the necessary traction for pulling the load. The high-torque, hoist-type, weatherproof motor is an integral part of the unit. Two sizes of 5,000 or 10,000 lbs. rope pull at 40 ft. per min. WEBSTER Drum-Type Car Pullers also available in sizes from 7½ up to 50 hp.

OTHER WEBSTER PRODUCTS

Belt, Apron and Flight Conveyors • Chain and Attachments • Idlers • Bucket Elevators • Clutches • Pillow Blocks • Sheaves • Pulleys • Sprocket Wheels • Rollers • Automatic Power Shovels (for bulk materials).
Write for literature.

Webster MANUFACTURING INC.
DEPT. NE-108 TIFFIN, OHIO
Offices in all Principal Cities
BULK MATERIALS HANDLING EQUIPMENT SINCE 1876

▲ For more details circle NED-836 K8 on enclosed inquiry slip ▲

Mix Liquids Safely

with NEW Air-Driven Drum Agitator

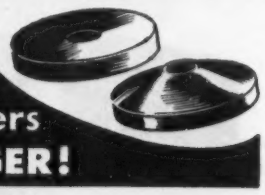
Flammable and volatile liquid mixtures can be agitated safely with the new Prenco Air-Driven Drum Agitator. Designed to operate off compressed air systems in plants, it fits into standard 55-gallon drums without need for drum alteration. Speedy agitation to even consistency is assured through scientific paddle design.

Lightweight and completely portable, the Prenco Air-Driven Drum Agitator is available in Model C for light mixtures and Model D for heavy, viscous materials. Write for full details.

PRENCO
LIQUID AGITATORS
Prenco Products, Inc., 507 E. Ten Mile Road, Hazel Park, Michigan

▲ For more details circle NED-837 K8 on enclosed inquiry slip ▲

CREST Heat-Pruf Faucet Washers LAST LONGER!



- Independent laboratory tests prove it!
- Last from 2 to 10 times longer by actual test!
- Eliminate nuisance and high cost of washer replacement!
- One of thousands of dependable Crest plumbing maintenance products — attested by Master Plumbers!

Try it yourself! Rugged "Pliers Test" proves tough Crest washers can really take it. Severe torture tests will not harm Crest washers.

FREE CATALOG

Write today for complete 200-page 1958 Crest Catalog illustrating over 3,000 Quality Plumbing and Heating Maintenance Specialties.

Gentlemen: At no obligation, please send me a FREE copy of the new 1958 Crest Catalog.
Name _____ Title _____
Company or Institution _____
Address _____
City _____ State _____

CREST MANUFACTURING COMPANY
4-65 48th Avenue, Long Island City 1, New York

▲ For more details circle NED-838 K8 on enclosed inquiry slip ▲

New Literature & Catalogs

Environmental Chambers

Webber Mfg. Co.—28-page brochure entitled "Controlled Atmospheric Conditions" presents comprehensive technical data on environmental chambers for research and testing, hardening, heating, and cooling metals and alloys. Bulletin provides an atmosphere and a high altitude chart with specific weight, pressure, and temperature figures for up to 100,000 and 1,780,465-ft altitudes, respectively. Environmental applications are highlighted.

▲ For more details circle NED-839 K8 on enclosed inquiry slip ▲

Electronic Parts & Equipment

Allied Radio Corp.—452-page illustrated catalog of radio and electronic parts and equipment lists over 32,000 items. Standard and special purpose electronic tubes, transistors, semiconductors, diodes, test instruments, transformers, capacitors, printed circuit components, rheostats, relays, switches, rectifiers, fuses, two-way radio telephones, counters, sound-powered telephones, program clocks, power supplies, and a multitude of other products are listed. High fidelity sound systems and intercommunications systems are detailed.

▲ For more details circle NED-840 K8 on enclosed inquiry slip ▲

Cooling Coils

American Air Filter Co.—Complete line of Herman Nelson direct expansion cooling coils and both standard and cleanable tube water coils is described in detail in 48-page illustrated Bulletin 880. Specifications, dimensional data, surface charts, and circuiting diagrams are included. Nine pages are devoted to selection information on water coils. Engineering data charts are included.

▲ For more details circle NED-841 K8 on enclosed inquiry slip ▲

Plastic Conduit

Southwestern Plastic Pipe Co.—Telec-Con plastic conduit for electrical and communication lines in single or multiple applications is subject of 4-page folder. Available sizes, applications, advantages, and fittings for the lightweight, durable product are covered.

▲ For more details circle NED-842 K8 on enclosed inquiry slip ▲

Shaft-Mounted Speed Reducers

Link-Belt Co.—Engineering and selection information on single reduction drives in six sizes, with nominal ratios of 5-to-1 and capacities to 50 hp; and double reduction drives in seven sizes, with ratios of 15-to-1 and up to 40 hp are found in 24-page illustrated Book 2618. Drives can be mounted at angular as well as horizontal positions.

▲ For more details circle NED-843 K8 on enclosed inquiry slip ▲

Gate & Globe Valves

Hammond Brass Works—Brief details of several models of bronze gate and globe valves are found in 4-page illustrated folder. Gate type, offered in several models, is for 150 and 125-psi working steam pressure. The several globe models are for 150 and 200-psi steam. Available sizes are listed.

▲ For more details circle NED-844 K8 on enclosed inquiry slip ▲

Glass Fiber Sleeving & Tubing

Owens-Corning Fiberglas Corp.—"Fiberglas Sleeving & Tubing Selection Guide" contains a selection factor chart, NEMA standard size charts, and a section on identification of grades and summary performance characteristics. Typical applications are shown, and government specifications are included.

▲ For more details circle NED-845 K8 on enclosed inquiry slip ▲

Hollow Aluminum Bar Stock

Harvey Aluminum—Standard sizes, wall thicknesses, dimensions, weight per foot, tolerances, available alloys, mechanical properties, and other data on hollow aluminum machining stock are listed in technical brochure entitled "Hollow Aluminum Bar Stock—Available in All Machining Alloys."

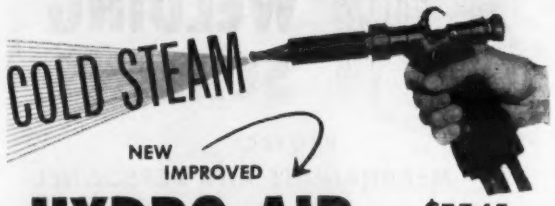
▲ For more details circle NED-846 K8 on enclosed inquiry slip ▲

Process Instrumentation & Equipment

B-I-F Industries, Inc.—Photographs, operational data, and design features of 12 products for positive control of materials in motion are included in 8-page Bulletin 100 R5. Covered are Dall flow tube for metering water, gases, slurries, etc.; venturi tubes; venturi flow nozzle; venturi insert nozzles; Chronoflo Telemeters for remote metering and control of distant process variables; Synchro-Scan systems for multifunction central control; and valves, meters, valve positioners, totalizing meters, and other equipment.

▲ For more details circle NED-847 K8 on enclosed inquiry slip ▲

"Get the drop" on every cleaning job with...



NEW IMPROVED
HYDRO-AIR PRESSURE WASHER
$11.45

- BLASTS STUBBORN DIRT!
- HARMLESS TO FINEST FINISH!

CUT COSTS on every cleaning job with HYDRO-AIR! This gun-type unit connects to regular air and hot or cold water supply. Compressed air "breaks" water into minute particles producing a dense penetrating force which blasts heavy dirt or quickly rinses metal sheets and small parts. Extremely economical . . . uses less than 3½ c.f. of air and 3½ gals. of water per minute. Operates with a 1 H.P. compressor. Weighs less than 2 lbs. (Rubber sleeve protects users' hand when hot water is used.)

NEW . . . Non-corrosive Plastiprene valve seat assures positive water cut-off regardless of minerals in water.

ORDER THROUGH YOUR SUPPLIER or write direct. (Inquiries invited from industrial cleaning compounders interested in resale.)

D & M PRODUCTS, INC.
24 N. RAYMOND AVE., PASADENA, CALIF.

Hydro-Air is widely used throughout these industries
Air Craft, Automotive, Bakeries, Breweries, Cement, Ceramics, Cheese, Construction, Distilling, Electrical, Food Processing, Foundries, Jewelry, Leather, Meat Packing, Machine Shops, Marine, Mining Equipment, Oil & Refinery, Optical, Paper, Pharmaceutical, Public Utilities, Repair Services, Railroad, Rubber, Ship Building, Stone Polishing, Textile, Tobacco, Transportation

▲ For more details circle NED-848 K8 on enclosed inquiry slip ▲

TRENT PACKAGED CIRCULATION HEATERS

for Water, Oil, Brine, Air and Various Gases

- Water—Superheat
- Oil, Oil Burners, Heat Transfer Liquids
- Brine, Defrost Applications
- Air, to High Temperatures—Test Work
- Gases, Hydrogen, Nitrogen, etc.

The unique design of TRENT "Packaged" Circulation Heaters *eliminates* return bends in the heating tubes . . . to assure free, uninterrupted flow of liquid through the heater—at the *exact* velocity you require! This means faster, more efficient heating for all types of process equipment.

TRENT SOH Oil Circulation Heater
TRENT SWH Water Circulation Heater
furnished fully equipped with

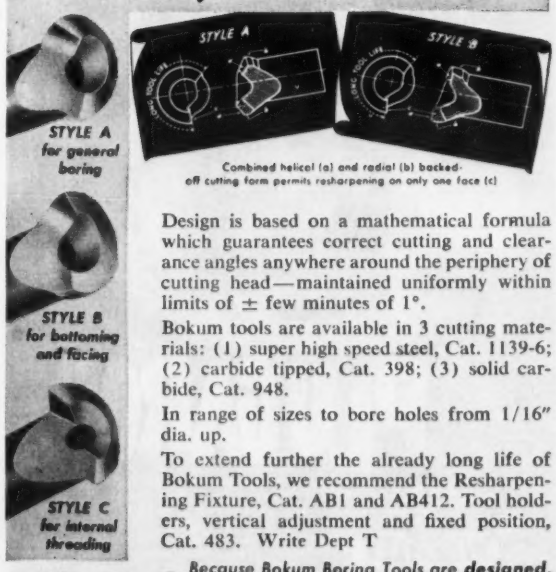
- All-Welded Companion Pipe Assemblies with Insulation
- Indicating or Non-Indicating Thermostats for High Temperatures
- Rugged Outer Casings with Mounting Tabs
- TRENT Multi-Tube Flanged Immersion Heater Unit
- Mounted 6" square Terminal Box

Let a TRENT engineer determine the TRENT "Packaged" Circulation Heater best suited for your operation . . . or custom-engineer one to meet your special wattage and voltage requirements.

TREN INC. Electrically Heated Industrial Equipment
251 LEVERINGTON AVE., PHILA. 27, PA.
In Canada Supreme Power Supplies Limited, Toronto 14

▲ For more details circle NED-849 K8 on enclosed inquiry slip ▲

BOKUM BORING TOOLS are *Designed* for boring



Combined helical (a) and radial (b) backed-off cutting form permits resharpening on only one face (c)

Design is based on a mathematical formula which guarantees correct cutting and clearance angles anywhere around the periphery of cutting head—maintained uniformly within limits of ± few minutes of 1°.

Bokum tools are available in 3 cutting materials: (1) super high speed steel, Cat. 1139-6; (2) carbide tipped, Cat. 398; (3) solid carbide, Cat. 948.

In range of sizes to bore holes from 1/16" dia. up.

To extend further the already long life of Bokum Tools, we recommend the Resharpening Fixture, Cat. AB1 and AB412. Tool holders, vertical adjustment and fixed position, Cat. 483. Write Dept T

Because Bokum Boring Tools are designed, they are uniform and remain uniform.

BOKUM TOOL CO. 14775 Wildemere Ave., Detroit 38, Mich.

▲ For more details circle NED-850 K8 on enclosed inquiry slip ▲

How to use

ROTAC TORQUE ACTUATORS

FREE—NEW 20-PAGE BOOK

EVERYTHING YOU'LL WANT TO KNOW ABOUT ROTAC —How It Works • Control • Applications and Special Uses • Installation Details • Complete Dimensions and Torque Ratings • Helpful Ideas on How You Can Use ROTAC in *Your* Operation.

EX-CELL-O CORPORATION

XLO 58-28

EX-CELL-O FOR PRECISION

GREENVILLE PLANT, GREENVILLE, OHIO

▲ For more details circle NED-851 K8 on enclosed inquiry slip ▲

S.S. WHITE Plastic Plugs and Caps give your product full protection against damage in handling, storing or shipping. Your customers can remove them easily, and your production line will save valuable minutes in installation time. WILL NOT SHRED, leaving debris in your product. THE ECONOMY LINE is of flexible elasto-plastic vinylite . . . retains elasticity; gives a stay-put fit and a non-slip grip. THE QUALITY LINE of rigid acetate is tough, non-brittle, impervious to petroleum-base oils and greases.

A complete range of sizes and types to fit every price range! Write for literature and samples. ASK FOR BULLETIN P-5708. It contains full details on the S.S.WHITE Plastic Plug and Cap line, including sizes, dimensions, etc. (Dept. 7P).

S.S.White PLASTICS DIVISION

10 East 40th Street, New York 16, New York

Western Office: 1839 West Pico Blvd., Los Angeles 6, Calif.

▲ For more details circle NED-852 K8 on enclosed inquiry slip ▲

New Processes & Materials

THREAD LUBRICANT reduces make-up torque on fittings

Shown in 1-lb can at left, Parker Ferulube leaded thread lubricant will prevent galling of threaded parts. It will reduce wrenching torque in making up tube connections with Ferulok fittings by as much as 75 per cent. Unipar pipe thread sealing compound and gasket paste shown at right is now being packaged in ½-pt brush-in-cap cans. Both products are available from **Parker-Hannifin Corp.**, Parker Fittings & Hose Div., Dept. NE, 17325 Euclid Ave., Cleveland 12, Ohio.

▲ For more details circle NED-853 K8 on enclosed inquiry slip ▲

HEAVY DUTY CUTTING FLUID for ferrous and nonferrous metals

Active elements of heavy duty Tap-Cut 35, a sulfur-free cutting fluid, induce an extreme-pressure, high wetting agent condition for minimum chip drag while imparting a brittlizing effect to the material being cut. Developed for ferrous and nonferrous metals, it functions in a heat-limiting capacity on low and medium tensile steels to keep interface temperatures below the critical point to retard tool wear. Fluid is brushed on in concentrated form for extreme heavy duty cutting, or it can be used with paraffin or napthenic type oils in a 1:12 solution for turning, milling, broaching, shaping, planing, and drilling-tapping. A 4-oz working sample is available. Made by **United Laboratories, Inc.**, Dept. N-25, 303 U. B. Bldg., Huntington, Ind.

▲ For more details circle NED-854 K8 on enclosed inquiry slip ▲

CLEANER-DEODORIZER also affords bacterial control

Blue Chip heavy duty cleaner combines cleaning, deodorizing and disinfecting in a single operation. Quaternary ammonia acts as a positive bacterial control and as a detergent. It gets rid of odor-causing bacteria and leaves an area smelling fresh and clean. It will remove all types of grit, grease, and soap scum; can be mixed with hot or cold, hard or soft water; and is powerful, yet is mild to the hands. It is reported to remove dirt from top of wax film without removing the wax. Blue Chip is mixed in ratio of 1 part to 20 parts of water. A 1-gal container lists for $3.90. Made by **S. C. Johnson & Son, Inc.**, Dept. NED, 1525 Howe St., Racine, Wis.

▲ For more details circle NED-855 K8 on enclosed inquiry slip ▲

New Vacuum Pumping Savings

NRC Rotary Gas Ballast Pump Model 100M. Other units with capacities from 1¼ to 400 CFM; blank-offs down to 5×10^{-6} mm. Hg.

are reported by users of NRC Rotary Gas Ballast Mechanical Vacuum Pumps. These pumps maintain their original high efficiency even when handling water and other condensable vapors. They have proved in thousands of installations that they save money three ways:

1. **Lower First Cost**—because no oil reclaiming equipment is needed.
2. **Lower Operating Cost**—because cycles are shortened by ability of pumps to maintain top speed throughout cycle after cycle.
3. **Lower Maintenance Cost**—because labor and material costs for frequent oil changes are avoided.

Send today for 16 page Bulletin 29-X.

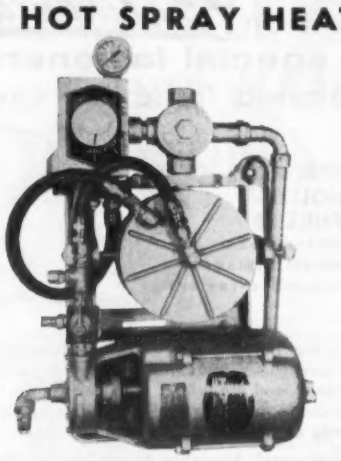
NRC EQUIPMENT CORPORATION

SUBSIDIARY OF NATIONAL RESEARCH CORPORATION

DEPT. 29, CHARLEMONT ST., NEWTON HIGHLANDS, MASS.

▲ For more details circle NED-856 K8 on enclosed inquiry slip ▲

PAINT SAVINGS OF 25% WITH HOT SPRAY HEATERS



Used with conventional material, the Spee-Flo 300 Hot Spray Heater reduces viscosity and atomizing pressure requirements, cutting wasteful overspray and effecting material savings of over 25%.

UL-approved, the Spee-Flo heater combines the advantages of a simple, coil-less heat exchanger and an explosion-proof centrifugal pump without gears or close tolerances to wear. The model illustrated above is equipped with the new Dial-a-Matic temperature controller, an exclusive Spee-Flo feature.

Write for free booklet, "Why Hot Spray?" The Spee-Flo Company, 6614 Harrisburg, Houston, Texas.

▲ For more details circle NED-857 K8 on enclosed inquiry slip ▲

CARTER BAND SAW GUIDES

world's largest, most complete line

- For Any Saw
- Any Speed
- Any Load
- Any Purpose

New Guidall "400" Series

NEW GUIDALL "400" SERIES with bearings rotating on inner race for 167% greater efficiency. Higher speeds and heavier loads than ever possible before.

FAMOUS MICRO-PRECISION GUIDE SERIES require only one set of support blocks for maximum support. Sizes to fit any saw.

NEW ZEFYR BALL BEARING GUIDE WHEEL fits all standard #1 and #0 guides. Has honed, perfectly balanced raceways. Higher speeds, heavier loads, longer life.

NEW BRONZITE Micro-Precision Guide made entirely of non-ferrous materials — cannot spark or rust.

NEW UNIVERSAL MOUNTING BRACKETS for Carter Guides on any machine.

Micro-Precision Guide Series

FREE CARTER BAND SAW GUIDES CATALOG and OPERATING INSTRUCTIONS MANUAL. Write us at:

421 Helmer Building
50 Market Ave., N. W.
Grand Rapids, Michigan

CARTER PRODUCTS COMPANY, Inc.

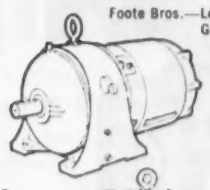
▲ For more details circle NED-858 K8 on enclosed inquiry slip ▲

FOOTE BROS.

Better Power Transmission Through Better Gears

MOTORIZED DRIVES

Foote Bros.—Louis Allis Gearmotor



- Gearmotors in sizes 1 to 150 HP Single, Double, Triple Reductions
- LINE-O-MOTOR Drives — 1 to 75 HP Double, Triple Reductions

LINE-O-MOTOR DRIVE

Foote Bros.—Louis Allis Gearmotors are available in over 3500 types and sizes, with output speeds from 780 to 7.5 RPM.; Foot, Flange, or Extended Bearing Flange mountings.

LINE-O-MOTOR Drives permit you to use your own NEMA frame motor, or specify the type you prefer. Ratios from 5 to 1 through 238 to 1.

GEARMOTORS and LINE-O-MOTOR Drives incorporate famous Foote Bros. DUTI-RATED Gearing for high capacity, smooth operation, long life.

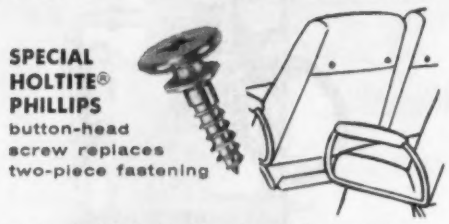
84 page Bulletin MRA has complete details and selection data on Foote Bros. Motorized Drives. *Write for it today.*

FOOTE BROS. GEAR AND MACHINE CORPORATION

4569 South Western Boulevard • Chicago 9, Illinois

▲ For more details circle NED-859 K8 on enclosed inquiry slip ▲

Count on *Continental* for
special fasteners
designed for extra savings



For a bus builder, this Continental-designed fastener serves as a towel-holding button, — replaces separate wood screw and metal button. Savings in parts cost — 10%. Faster, easier driving saves still more in assembly time and fastener waste.

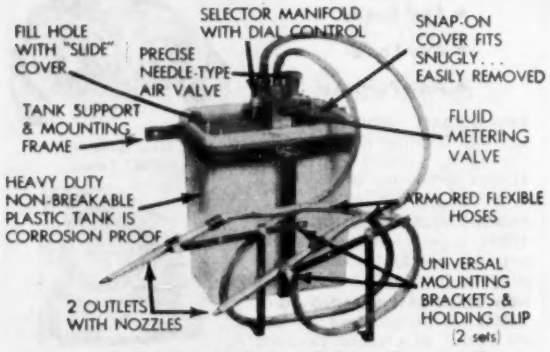
Continental Assembly Specialists' advice is unbiased, since standard Holtite Fasteners include all types. If a "special" is the best answer, you can rely on Continental design experience for extra savings.

What's your fastening problem? Write Dept. ND for full details.

CONTINENTAL
SCREW COMPANY, NEW BEDFORD, MASS.
HOLTITE FASTENERS
HOLTITE PHILLIPS AND SLOTTED HEAD
WOOD • MACHINE • TAPPING • THREAD CUTTING • SEMS • NYLOK
HY-PRO PHILLIPS INSERT BITS AND HOLDERS

▲ For more details circle NED-861 K8 on enclosed inquiry slip ▲

NOW! GRAYMILLS OFFERS
ALL THE FEATURES YOU NEED IN A
MIST COOLANT SYSTEM
AT LESS COST

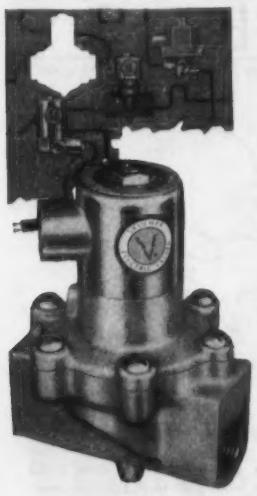


Call your Industrial Distributors. Insist on Graymills Quality—you'll get the BEST in mist cooling systems, and the price is low.

162

GRAYMILLS CORPORATION
3717 N. LINCOLN AVE.
CHICAGO 13, ILL.
GRAYMILLS
Superflo COOLANT PUMPS AND UNITS

▲ For more details circle NED-862 K8 on enclosed inquiry slip ▲



New low-cost, high-flow, 2-way valves with . . .
DEPENDABLE SKINNER QUALITY

These L Series valves with ¾" and 1" diameter orifices complete an *all new* line of 2-way valves previously introduced in January in the ⅜" and ½" sizes.

Manufactured to the highest engineering standards, these pilot-operated, high-flow industrial valves are a welcome addition to the famous Skinner solenoid valve line. They are smaller and more compact than the M2 Series they replace and feature a unique diaphragm design. They are also considerably lower in cost. The ¾" size, for example, will cost you 51% less.

These larger L Series models—¾" and 1"—will be available in standard and Explosionproof construction, normally open or normally closed. They operate on a pressure differential of 5 to 150 psi and will control such common media as air, oil and water.

For information, please contact our Representative or Distributor near you—you'll find him listed in the yellow pages or write us at the address below, Department 430.

SKINNER ELECTRIC VALVE DIVISION NEW BRITAIN CONNECTICUT 105 EDGEWOOD AVENUE
THE CREST OF QUALITY

▲ For more details circle NED-863 K8 on enclosed inquiry slip ▲

New Literature & Catalogs

Polypropylene Plastic

Hercules Powder Co.—Included in information provided in 10-page technical booklet on Pro-fax polypropylene plastic is a broad range of commercial applications. Plastic is offered in three types and a complete range of colors. Commercial applications include automobiles, business machines, containers, film, home appliances, refrigerator parts, valves, housewares, and hospitalware.

▲ For more details circle NED-864 K8 on enclosed inquiry slip ▲

Cutting Costs Through Group Relamping

General Electric Co., Large Lamp Dept.—A simplified plan for group relamping in industrial plants and commercial establishments is offered in 16-page Bulletin No. 320-8106. This procedure assures uniform life, uniform light output, and freedom from defects. All of these contribute to cutting maintenance costs.

▲ For more details circle NED-865 K8 on enclosed inquiry slip ▲

How to Buy Investment Castings

Alloy Precision Castings Co.—Significant evaluation factors for judging investment castings and selecting casting suppliers are outlined in booklet entitled, "How to Buy Investment Castings." Many tips and rule-of-thumb guideposts are included. Whether or not parts should be investment cast is covered.

▲ For more details circle NED-866 K8 on enclosed inquiry slip ▲

Glassed-Steel Process Equipment

Pfaudler Co.—Revised "Buyer's Guide to Corrosion Resistant Process Equipment" contains information on all types of Pfaudler glassed-steel and alloy equipment for chemical, food, pharmaceutical, dairy, and other industries. Also described are factory and field services ranging from project engineering to erection. Reactors, heat exchangers, evaporators, tanks, and process equipment are treated separately.

▲ For more details circle NED-867 K8 on enclosed inquiry slip ▲

Diamond Wheels & Hones

Diacraft, Inc.—28-page catalog describes and gives list prices for a complete line of metallic and resinoid bonded diamond grinding wheels and hones. Standard and special types are shown for grinding and finishing practically any type of material.

▲ For more details circle NED-868 K8 on enclosed inquiry slip ▲

Pallet Racks for Bulky Items

Republic Steel Corp., Berger Div.—Described in 6-page Brochure EC-2018 is a complete line of steel pallet racks for bulky, irregular, fragile, and odd-lot materials. Heavy duty racks support up to 15,000-lb loads, and each rack opening is capable of handling a 3000-lb pallet load. Light duty racks hold two pallet loads per opening, or 7000 lb for a single-face four-post unit.

▲ For more details circle NED-869 K8 on enclosed inquiry slip ▲

Charting With Tapes

Chart-Pak, Inc.—Over 435 pressure-sensitive tapes of various sizes, colors, and patterns are detailed in 32-page booklet, "Visualization Made Easier." These handy-to-use tapes are used for making graphs, charts, layouts, printed circuit drawings, map overlays, slides, and presentations. Also described are plastic grid sheets, and the new Tape-Pens which facilitate applying the tape.

▲ For more details circle NED-870 K8 on enclosed inquiry slip ▲

High Frequency Equipment

Louis Allis Co.—Induction frequency converters for supplying 80 to 400-cycle current and motor-alternators for operations requiring 400 to 3000 cps are described in 12-page Bulletin 2250. Increases in output obtainable with high frequency drives are explained.

▲ For more details circle NED-871 K8 on enclosed inquiry slip ▲

Basic Switch Designs

Minneapolis-Honeywell Regulator Co., Micro Switch Div.—32-page Basic Switch Catalog No. 62C contains complete design and application data on hundreds of basic switches for industrial and commercial uses. Among the new switches in this revised catalog are high-precision roller lever, adjustable actuator, and pulse switches. Such factors as electrical rating, choice of contact arrangement, available terminal designs, operating characteristics, and actuating means are covered.

▲ For more details circle NED-872 K8 on enclosed inquiry slip ▲

S-1097 Catch with S-1162 Top

SAFE
New Sessions compression spring catch has specially designed action to protect personnel from injury, even when opened at full pressure. Enclosed springs eliminate danger of fouling. Approved to Signal Corps specs SC-C-76220, SC-B-76221 and amendments.

POWERFUL
Catch is preloaded at 70 lbs., increasing to 100 lbs. through ⅛" deflection. Provides a watertight seal with rubber gasket.

SURE
The quality of Session's stamped assemblies assures positive performance even under adverse conditions.
Write for complete dimensions and prices.

See —
J. H. Sessions & Son
— for stampings

J. H. SESSIONS & SON
289 RIVERSIDE AVENUE • BRISTOL, CONN.

▲ For more details circle NED-873 K8 on enclosed inquiry slip ▲

bells . . . horns
chimes
cow gongs

Wheelock SIGNALS
complete line of quality audible signals

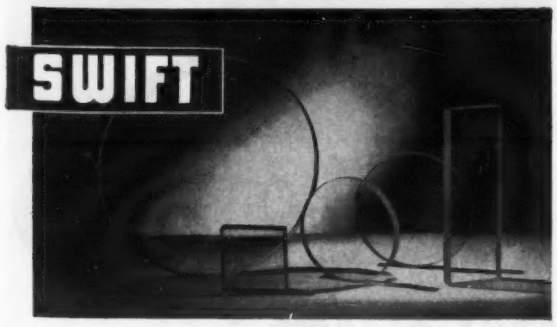
gives you one source of supply for any signal

Vibrating bells, ranging from 2½ inches to 20 inches, incorporate Wheelock Signals' original Underdome type operation. Such advanced designs and styles are represented in our entire line of audible signals: explosion proof bells, musical and soft tone signals, chimes, cow gongs, tapsounders and buzzers, horns and whistles.

Wheelock Signals' new brochure just issued, shows complete photos, descriptions, diagrams and specifications of these audible signals. For your copy, write on your letterhead . . . ask for Bulletin No. 5C.

Wheelock SIGNALS INC
LONG BRANCH, N. J.

▲ For more details circle NED-874 K8 on enclosed inquiry slip ▲



a fast, convenient source for

PYREX SIGHT GLASSES

We can supply perfectly true circles, precision-ground from heat-resistant polished plate glass. Used by chemical companies from coast to coast —resist clouding, pitting, chemicals (except HF and strong hot caustic solutions).

Squares, rectangles or odd shapes in 8 thicknesses (1/8" to 1"), sizes up to 24" x 60", also available for immediate shipment. Write, wire or phone for bulletin or quotation.

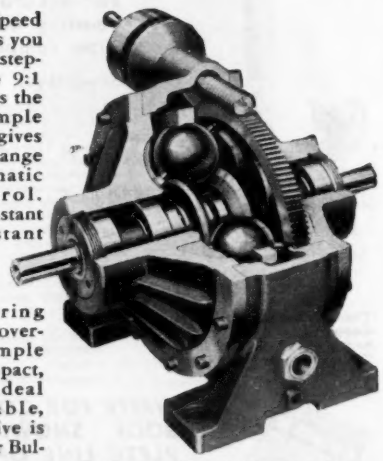
SWIFT *Glass Division*
SWIFT LUBRICATOR COMPANY, INC.

5 Glass St., Elmira, N.Y.

▲ For more details circle NED-875 K8 on enclosed inquiry slip ▲

Get infinitely variable speeds with smooth, instant change

CLEVELAND Speed Variator gives you infinitely variable, stepless speeds up to 9:1 (from 1/3 to 3 times the input speed). Simple speed regulation gives instant, smooth change by manual, automatic or remote control. Available with constant torque or constant horsepower rating. No belts or complicated linkage. Ample bearing support to carry overhung pulleys. Simple construction, compact, quiet running. Ideal where dependable, variable speed drive is required. Write for Bulletin K-200.



NOW available in 18 sizes, ranging from one-half to 16 horsepower at 1750 input RPM.

THE CLEVELAND WORM & GEAR COMPANY
Speed Variator Division, 3283 E. 80th St., Cleveland 4, O.
Sales Representatives in all major industrial markets

▲ For more details circle NED-876 K8 on enclosed inquiry slip ▲

Pick the right paint for the job

***FREE* PAINT INDEX**

Whatever your industrial painting problem, there's *one* paint especially formulated to give the *most effective* protection. With this handy guide, choosing that paint is simple and easy. Profitable, too, because the correct choice will wear longer, save you money on costly repaints. Write for your free money-saving Paint Index today!

75th ANNIVERSARY 1883 · 1958

TROPICAL PAINT COMPANY
1124-1236 W. 70th, Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883 • SUBSIDIARY OF PARKER RUST PROOF COMPANY

▲ For more details circle NED-877 K8 on enclosed inquiry slip ▲

New Processes & Materials

GEAR LUBRICANT
packaged in aerosol cans

Open gears, chains, cams, and wire rope can be lubricated with Acrolite Gear-Lube Spray by spraying it from push-button aerosol cans. It forms a tacky surface within minutes and, as the gear rotates, it forms a web of strings that continuously stretch across the tooth faces. The heavy duty lubricant clings to frictional surfaces under wet or dry, dusty or clean conditions. The 16-oz can, equivalent to 3 lb of grease, sells for $1.95. Made by **Acrolite Products, Inc.**, Dept. N, 106 Ashland Ave., West Orange, N. J.

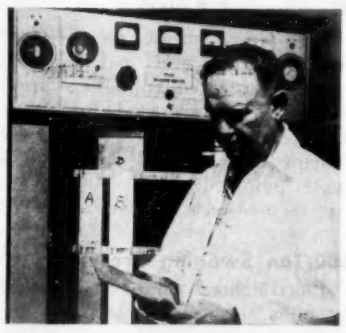
▲ For more details circle NED-878 K8 on enclosed inquiry slip ▲

AIR COMPRESSOR CLEANER
drip-fed liquid removes carbon

Fed into air compressor air intake lines by a drip feed lubricator, Hydrodyne-AC liquid removes carbon and eliminates carbon build-up on valves and rings. Emulsified carbon is carried out the discharge lines by air velocity, settles to the bottom, and is blown out through automatic traps. Liquid is drip-fed at the rate of 1 drop per minute for each 1000 cfm of air compressor capacity. Price is $8.00 per gal in quantity, or $9.95 per 1-gal can. Made by **Aquadyne Corp.**, 60 Terminal Ave., Clark, N. J.

▲ For more details circle NED-879 K8 on enclosed inquiry slip ▲

ALUMINUM ROOF COATING
produces a bright roof finish



Tests of Silverleaf aluminum roof coating on the Atlas Weather - ometer show that its Aerex additive gives it a brighter finish upon application than is normally obtained from this type of coating. It affords year - round insulation in addition to its waterproofing function. It reflects the sun's rays to reduce building temperatures in the summer and prevents escape of building heat through the roof in winter. Made by **Pace Products, Inc.**, Dept. J-1, 1609 Washington St., Kansas City 8, Mo.

▲ For more details circle NED-880 K8 on enclosed inquiry slip ▲

Most modern chart plant in America!

***ARCCO* steps up production at . . .**

New Factory

32 years of growth

A new factory is like a new tool and in the case of Arcco we have "tooled" up for a new era in high speed production of highly accurate charts to meet ever growing needs of our vast clientele, both domestic and foreign. Our friends and customers are especially pleased to know that with new equipment, new processes and completely air-conditioned storage for 25,000,000 charts, we shall within a short period of time improve upon our delivery schedule. These new facilities, we hope, will help us maintain the present price schedule despite rising costs.

We wish to express our appreciation to several thousand regular purchasers of our charts, instruments, etc., for their patience and tolerance with us during the past crucial year when deliveries have certainly been a problem.

We cordially invite our friends to visit the new plant any time they are in the vicinity.

AMERICAN
RECORDING CHART COMPANY
7142 East Candor Street, Los Angeles 22, California

▲ For more details circle NED-881 K8 on enclosed inquiry slip ▲

MIX SOLUBLE OIL and WATER in 1/10th THE TIME

You can eliminate extra handling, save time, material and space . . . mix oil and water automatically, in the correct proportion, to form a uniform emulsion. The amazing . . .

FORCE-FLO
SOLUBLE OIL & WATER MIXER

is easy to use . . . completely foolproof . . . has no moving parts! Fits standard drums.

Takes The Guesswork Out of Mixing!

• *Write For Literature* •

Force-Flo, Inc. P. O. BOX 2442 EAST CLEVELAND 12, OHIO
— Distributors Invited —

▲ For more details circle NED-882 K8 on enclosed inquiry slip ▲

Pyles

PORTABLE MIXING AND FILLING UNITS

Pyles-SEMCO
SEALANT GUN
CAPACITY
2½ oz., 6 oz., 12 oz.

• Designed for blending catalyst and additive materials in an open container . . . Up to a quart or gallon of material may be mixed in a few minutes and delivered, while still under pressure, into a polyethylene cartridge for use with the sealant gun. Designed for low production and portability for the industrial and building trades.

AVAILABLE IN ONE QUART AND ONE GALLON SIZES

Automatic Continuous
BLENDOMETER
metering and mixing polyurethenes; epoxies, polyesters

Multi-Purpose Pumps
•
Metering and Measuring Devices
•
Hydraulic Hose Machines & Couplings
•
Conveyor Lubricators
•
"Tip-Seal" Flow Guns & Nozzles

• The Pyles Blendometer is a production unit suitable for continuous measuring and mixing of two and three part chemical systems. Chemicals, which will gravity flow, can be metered to a mixing head through variable control metering units which can be adjusted with very high accuracy. Unit measures 36" x 21" x 29½" high. Weight 500 lbs.

PYLES INDUSTRIES, INC.
8926 SECOND AVENUE · DETROIT 2, MICHIGAN

▲ For more details circle NED-883 K8 on enclosed inquiry slip ▲

Other FLEX-A-PRENE "Firsts"

- Lint free — no wicking action.
- All parts non-toxic — non-allergic.
- Self-adjusting — snug-fitting.
- Simply designed for easier filter removal.
- Inside of frames serrated for airtight locking.
- Weighs only 1 ounce.
- Designed for use with goggles or spectacles.
- Only 4 tough long-wearing, interlocking parts.
- Non-irritating plastic frames — unbreakable in normal usage.
- Prenex filter outlasts all throw-away types. Savings pay the cost of a complete mask.

Positive Protection Against Pigment Overspray!

sample $1.50 postpaid

Quantity prices as low as $1.15

(Industrial Prices Only)

FLEXO Products, Inc. Westlake, Ohio

▲ For more details circle NED-884 K8 on enclosed inquiry slip ▲

you too . . . . can cut costs on heat-treating small tools!

Do it with a Waltz small tool Furnace!

furnace - quench tanks - furnace (corner) positioning

furnace - furnace - quench tanks (side-by-side) positioning

furnace - quench tanks - furnace (side-by-side) positioning

Compact units fill very little space, can easily be positioned to fit your floor plan (see diagram at left). Furnace sections equipped with casters.

Includes a pre-heat furnace, a high heat furnace, and quench tanks. Temperature range permits treatment of all high speed steels including cobalt.

Waltz small tool furnaces are "money makers" in hundreds of shops throughout the country.

A complete line of Waltz standard or special heat-treating furnaces, using all types of fuels, are built to suit your requirements. Write Dept. B for comprehensive bulletin.

Waltz furnace company
SYMMES STREET
CINCINNATI, OHIO

▲ For more details circle NED-885 K8 on enclosed inquiry slip ▲

Tempilstiks°

FOR ALL HEAT-DEPENDENT OPERATIONS . . .

looks like a crayon
marks like a crayon
tells temperatures like a precision instrument

Sixty-three different compositions enable you to determine and control working temperatures from 113° to 2000°F. TEMPILSTIK° marks on workpiece "say when" by melting at stated temperatures — plus or minus 1%.

Also available in liquid and pellet form . . . Write Advertising Division for sample TEMPIL° pellets. . . State temperatures of interest — please!

Tempil° CORPORATION
132 WEST 22nd STREET, NEW YORK 11, N. Y.

Visit us at Booth 422—Nat'l. Metal Expos.—Cleveland, Oct. 27-31

▲ For more details circle NED-886 K8 on enclosed inquiry slip ▲

New Literature & Catalogs

Self-Adhering Wire Markers

North Shore Nameplate Inc.—A wide variety of pressure-sensitive Speedy-Marx wire markers is shown in 8-page catalog. Available on instant-release dispensing cards, markers are made in a range of number, letter, and code symbols as well as in various colors for service at temperatures from −350 to 350° F.

▲ For more details circle NED-887 K8 on enclosed inquiry slip ▲

Hard Rubber Pipe Fittings & Valves

Luzerne Rubber Co.—Threaded fittings, check valves, petcocks, and a wide range of valves made of hard rubber and Buna-N synthetic rubber for chemical and processing service are described in 8-page Bulletin PF1300. Table lists chemical resistance of these two materials.

▲ For more details circle NED-888 K8 on enclosed inquiry slip ▲

Small AC Motors

Barber-Colman Co.—Alternating current shaded-pole motors in ratings up to 1/20 hp at 2900 rpm and with starting torques up to 0.7 lb-in. are subject of Catalog U-1. Performance characteristics are given for standard motors as well as reversible, synchronous, and geared types. Fan blades and enclosures are covered.

▲ For more details circle NED-889 K8 on enclosed inquiry slip ▲

Rotary Blowers & Pumps

Sutorbilt Corp.—Continuous service rotary positive pressure blowers, and gas and vacuum pumps are detailed in illustrated Bulletin S65C. Cut-away drawings show construction in detail. Volumes of air or gas from 1000 to 20,000 cfm and pressures and vacuums up to 10 psig single stage can be handled. Twenty-four applications are listed and many are illustrated.

▲ For more details circle NED-890 K8 on enclosed inquiry slip ▲

Corrugated Boxes

Gaylord Container Corp.—Case histories of savings in packaging and materials handling achieved by using corrugated containers are included in 18-page brochure, "Corrugated Boxes for Electric & Power Equipment." Products covered include electric motors, tractor parts, electric control, gasoline engines, and water pumps.

▲ For more details circle NED-891 K8 on enclosed inquiry slip ▲

500-Ton Swaging Press

Electric Steel Foundry Co.—How the Esco 500-ton swaging press can replace the hand splice method in applying wire rope fittings at lower cost is related in 8-page illustrated Catalog 208A. Functioning of the press is shown in cut-away drawings. General data and fittings specifications are included.

▲ For more details circle NED-892 K8 on enclosed inquiry slip ▲

Buttweld Tubing

Pittsburgh Tube Co.—"Handbook of Cold Drawn, Buttweld Mechanical Steel Tubing" describes the manufacture, uses, and economies of this product in industry. Metallurgical, mechanical, and engineering data are given in its 60 pages. Seventy-five photos and drawings explain production, finishing, and inspection steps.

▲ For more details circle NED-893 K8 on enclosed inquiry slip ▲

Trestles & Scaffolding Accessories

Patent Scaffolding Co.—Photos, drawings, and application views of steel trestles and scaffolding accessories for use by maintenance personnel and in light construction are found in 8-page Catalog M-R. Specifications and where-to-use data are also given.

▲ For more details circle NED-894 K8 on enclosed inquiry slip ▲

Pipe Insulation

L. O. F. Glass Fibers Co.—"Spring-hinge" opening and closing; ease of installation, cutting, and fitting; and light weight are advantages of Micro-Lok pipe insulation related in 8-page Folder WPN-2. Data on physical properties, thermal conductivity, various types of factory-applied jackets, and comparative data are included.

▲ For more details circle NED-895 K8 on enclosed inquiry slip ▲

Lengthening Wire Rope Life

H. K. Porter Company, Inc., Leschen Wire Rope Div.—Proper lubrication and safe storage of wire rope can substantially lengthen its service life, according to Red-Strand Service Bulletin 103. It states that the lubricant must be acid-free and not water soluble. Many other service tips are presented.

▲ For more details circle NED-896 K8 on enclosed inquiry slip ▲

AO 710 SPLASH GOGGLE

Latest and finest eye protection for chemical workers. Indirectly ventilated, no vents in frame yet twice as fog-free as similar goggles. Lightweight, comfortable vinylite frame. Impact resistant plastic lens. All rubber headband. All parts replaceable. Fits over all spectacles and Safety Glasses. Protects against splashing liquids, spray, impact. Clear or green lenses and frames. Specify color of both when ordering.

Always insist on Trademarked Safety Products

American Optical Company SAFETY PRODUCTS DIVISION

SOUTHBRIDGE, MASSACHUSETTS

Safety Service Centers in Principal Cities

1833-1958 • 125 LEADERSHIP YEARS

▲ For more details circle NED-897 K8 on enclosed inquiry slip ▲

Adjustable conax® PIPE CLAMP THERMOCOUPLE

for accurately reading outside pipe temperatures

advantages

- Used wherever immersion thermocouples are impractical or undesirable
- Used where extreme corrosion and erosion are problems
- Provides temperature readings on alloy, plastic or glass pipes that are not easily entered
- High pressure lines unbroken —a safety feature
- Installation and service without interrupting operations or flow
- Permits checking other temperature measuring devices
- Checks effectiveness of insulation
- Multiple units readily used for obtaining temperature gradients
- Installed in less than a minute

Thermocouples available in Copper-Constantan for low temperatures or Iron—Constantan and Chromel—Alumel up to 1000° F.

WRITE FOR CONAX DATA BOOK SHOWING COMPLETE LINE OF THERMOCOUPLE ASSEMBLIES AND PRESSURE SEALING GLANDS.

conax corporation
2326 Walden Avenue, Buffalo 25, N. Y.

▲ For more details circle NED-898 K8 on enclosed inquiry slip ▲

ARCOS WELDING FACTS

Extra Benefits For Aluminum Welders Using Inert Gas Arc—Semi or Fully Automatic

Specify Arcos Aluminum Spooled Wire and be sure of these vital features: A chemical analysis and cleanliness within exacting standards. Smooth, easy feeding off level-layer-wound reels. Wide selection of grades for accurate matching of job requirements. Pre-tested to assure top performance, sound uniform weld metal.

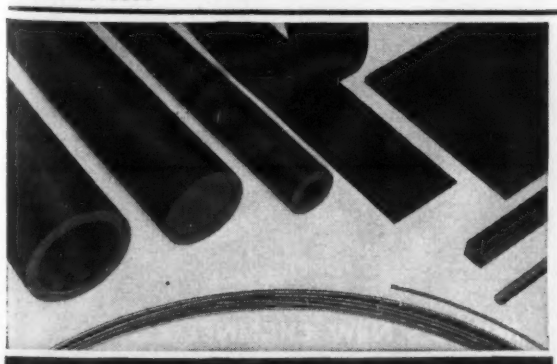
FREE ALUMINUM DATA BULLETIN

Yours for the asking—an application chart filled with helpful information on Arcos Aluminum Rods and Electrodes.

Arcos Corporation, 1500 S. 50th St., Philadelphia 43, Pa.

ARCOS | Filler Metal Specialists

▲ For more details circle NED-899 K8 on enclosed inquiry slip ▲



NYLATRON® G S

Gives the property advantages of nylon, PLUS... improved mechanical characteristics:

- Greater Rigidity—higher modulus of elasticity, less deformation under load.
- Higher Heat Distortion Temperatures—distortion temperatures 70% higher than nylon 101.
- Lower Thermal Expansion—coefficient approximately 60% of nylon 101.
- Low Surface Friction—can be used without lubrication.
- High Wear and Abrasion Resistance—can outlast, outperform metal.

NYLATRON GS, a molybdenum disulphide filled nylon*, is formulated to expand the field for nylon parts such as bearings, bushings, liners or other wear parts.

Stock shapes of NYLATRON GS include rod, strip, tubing, tubular bar and plate in all standard sizes—for rapid, low-cost fabrication on standard metalworking tools. In addition, it is available in powder form for molding. Polymer can also supply stock shapes of all commercial nylons on request. Write today for detailed information about NYLATRON GS—or other nylon formulations to meet your specific requirements.

*Patents applied for

THE POLYMER CORPORATION OF PENNA.
Reading, Pennsylvania

Export: Polypenco, Inc., Reading, Pa., U.S.A.
POLYPENCO Nylon, POLYPENCO Teflon†, NYLAFLOW® and NYLATRON® GS.

POLYPENCO

†DU PONT TRADEMARK

▲ For more details circle **NED-900 K8** on enclosed inquiry slip ▲

NEW AGASTAT®

HAS LONGER OPERATING LIFE

The Agastat time/delay/relay has been completely re-designed, inside and out, to make every moving part last longer and operate more reliably. Here are some other important advantages:

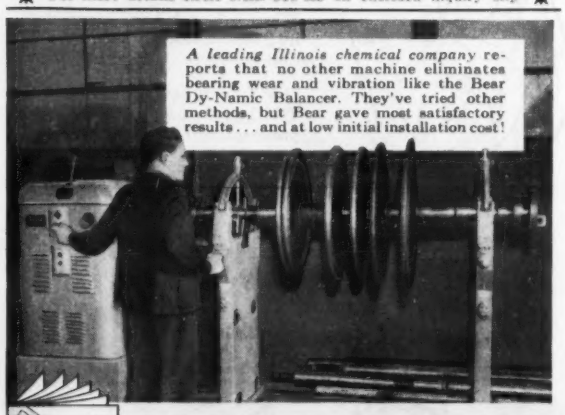
- Dial adjustment for ease and accuracy
- Five timing ranges, covering an overall range of from 0.08 seconds to 15 minutes
- Timed intervals remain the same through repeated readjustments
- Integral wiring diagram and calibration plate
- Measures only 4-9/16 x 2-9/16 x 2-5/8"
- All contacts are flexible contacts
- Contacts are larger for fast heat dissipation

Write for details and application engineering assistance to Dept. A32- 105.

AGA DIVISION

Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth, New Jersey
Pioneers in Pneumatic Timing

▲ For more details circle **NED-901 K8** on enclosed inquiry slip ▲



FREE CATALOG

tells how

DY-NAMIC BALANCING Cuts Maintenance Costs!

How to balance rotating parts from 4 oz. to 8 tons.
How to balance statically and Dy-Namically in one operation.
How others are cutting maintenance costs with Dy-Namic Balancing.
Specs and engineering data about complete line of Bear Dy-Namic Balancing Machines.

This Bear Catalog describes the Bear Dy-Namic Balancing Machines, which are used for maintenance work, to eliminate costly down-time for repairs, prolong machinery life and reduce mechanical failures. For your FREE copy, write Bear Mfg. Co., Dept. N-5, Rock Island, Ill.

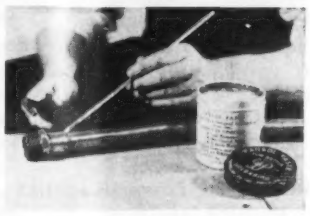
1010

BEAR
STATIC AND DY-NAMIC BALANCING MACHINES

▲ For more details circle **NED-902 K8** on enclosed inquiry slip ▲

New Processes & Materials

SOLDERING PASTE has increased fluxing action



Nearly 50 per cent more fluxing agent is contained in Farsol soldering paste than previously to increase its speed and efficiency in torch soldering. With Farsol Paste there is no period of suspense between the melting point of the solder and its flowing in a smooth, clean, tinning action. Chemical additive increases fluxing action without oxidizing under high heat of a torch. Paste is dehydrated in manufacture to eliminate sputter or boiling in use. It is offered in ½ and 1-lb cans, six of which sell for $3 and $5, respectively. Made by **Farrelloy Co.**, 1246 N. 26th St., Philadelphia 21, Pa.

▲ For more details circle **NED-903 K8** on enclosed inquiry slip ▲

SAFETY SURFACING MATERIAL makes a slip-resistant surface

Paint - like Cidco Nonslip is a safety surfacing material that can be applied to all types and contours of materials. It dries to a long - wearing, nonsparking, slip-resistant surface. Nonabrasive particles provide cushioning and noise absorption, as well as slip resistance. It will adhere to concrete, metals, wood, plastics, glass, ceramics, and leather, and can be used where water and a wide range of chemicals and solvents are prevalent. Its various colors and grades can be sprayed, painted, troweled, or spread with adhesive type spreaders. Made by California Industrial Development Co. and distributed by **E. D. Bullard Co.**, Dept. A, 2680 Bridgeway, Sausalito, Calif.

▲ For more details circle **NED-904 K8** on enclosed inquiry slip ▲

HYDRAULIC FLUID stable from −25 to 550° F

High temperatures and environmental extremes associated with aircraft and missiles are withstood by QF-6-7009 hydraulic fluid. This alkyl silane fluid has excellent lubricating properties and is thermally stable in closed systems over a −25 to 550° F range for long periods and up to 700° F for short periods. Fluid also shows promise as a base oil in high temperature turbine lubricants. In thermal stability test, QF-6-7009 fluid sealed within a glass tube, then inserted in metal container, was placed in a 700° F oven for 10 hr. It was virtually unaffected, whereas similarly packaged control fluids exploded in less than 4 hr and were poured out as crystalline residues, as shown. Developed by **Dow Corning Corp.**, Dept. IS, Box 592, Midland, Mich.

▲ For more details circle **NED-905 K8** on enclosed inquiry slip ▲

ACRYLIC PLASTIC SHEET has extra wide corrugations

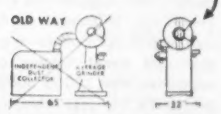
Corrugations are spaced on a 3-in. center-to-center frequency on this acrylic plastic sheet, extruded in ⅛-in. thickness. Ridges of the corrugations are flat and ¾ in. wide. All surfaces are either flat or at a 45-deg angle. A separate locking strip permits joining the sheets to any desired width without breaking the corrugation pattern. Sheet is stocked in standard translucent white colors, 48-in. widths, and lengths up to 96 in. Other colors and lengths to 25 ft can be ordered. Made by **Cadillac Plastic & Chemical Co.**, Dept. NED, 15111 Second Ave., Detroit 3, Mich.

▲ For more details circle **NED-906 K8** on enclosed inquiry slip ▲

Hammond of KALAMAZOO

2 IN 1 NO-DUST GRINDER

SAVE OVER 50% FLOOR SPACE THE HAMMOND WAY



DUST-LADEN AIR IS A MENACE!

- Protect your employees' health.
- Protect nearby machine tools from dust and grit.
- Save floor space — requires only 6½ square feet.

For 10", 12", and 14" wheels.
Write for Catalog.

Hammond Machinery Builders INC.
1623 DOUGLAS AVENUE KALAMAZOO, MICHIGAN

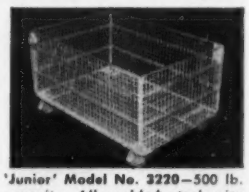
SEE US NAT'L METAL EXPOSITION • BOOTH 1250 • OCT. 27-31 • CLEVELAND

▲ For more details circle **NED-907 K8** on enclosed inquiry slip ▲

the Answer . . . to your small parts Handling-Storage-Transport

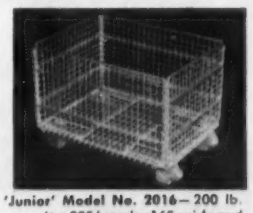
the NEW PALLETAINER 'Junior'

- Close-mesh, all-steel containers with fold-down features
- Ideal for *all* small parts handling—storage—transport



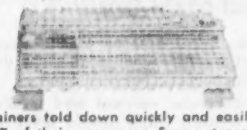
'Junior' Model No. 3220—500 lb. capacity. All welded steel wire mesh, reinforced. 32" long by 20" wide and 16" high. Mesh openings are 1⅛" square. Equipped with 4 fabricated steel stacking legs welded to deck bottom. Finished in fire-baked Aluminum paint. Weight 38 lbs.

• The new lightweight Palletainer 'Junior' models are sturdy, close-meshed, all-steel containers designed for efficient handling, storage, protection and safe transit of any small parts—assembled or finished products. Ruggedly built of reinforced welded steel wire mesh, the 'Juniors' incorporate many of the outstanding construction and convenience features found only on large, heavy-duty containers. Check your plant today—see how many places the 'Junior' models could smooth production, speed processing, deliveries and save valuable handling time.



'Junior' Model No. 2016—200 lb. capacity. 20" long by 16" wide and 12" high. All welded steel wire mesh. 1⅛" square mesh openings. Four fabricated steel stacking legs. Lossproof side locks. Aluminum painted. Weight 25 lbs.

If you handle or process small parts . . . you need Palletainer 'Juniors'!



'Junior' Palletainers fold down quickly and easily to save over 75% of their open area. Saves storage space, makes handling easier and lowers return shipping costs.

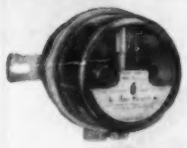
Try these tested, proved-in-service containers for all types of parts handling. They'll actually pay for themselves in handling savings. Write today for complete information, prices and delivery dates.

Palletainers are manufactured exclusively by

UNION STEEL PRODUCTS CO.
505 N. Berrien St., Albion, Michigan

MANUFACTURING PLANTS ALSO IN COMPTON, CALIF. AND WATERLOO, QUEBEC, CANADA

▲ For more details circle **NED-908 K8** on enclosed inquiry slip ▲


63300C

PHOTOELECTRIC CONTROLS for OUTDOOR LIGHTING

64401

Fisher-Pierce photoelectric controls provide dependable, automatic control of lights regardless of time of day, season or weather. Lights are switched on at the same daylight value each day, off when daylight returns. Non-mechanical, they never need setting or re-setting, even after power failures. The basic F-P circuit has proven dependable, rugged and trouble-free by more than nine years' use, in controlling lights on aircraft obstructions, signs and in store windows; in parking, loading and storage areas; in street lighting and other installations. Load capacities from 300 to 6000 watts; integral and auxiliary protective devices; wide variety of mounting arrangements; SPST, SPDT, DPST contacts; turn-on settings from 1 to 500 foot-candles.

Write for descriptive bulletins, outlining your requirements.

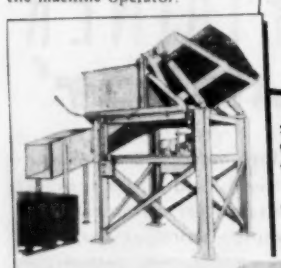
THE FISHER-PIERCE CO., INC.
86 PEARL STREET, BOSTON 85, MASS.

▲ For more details circle NED-909 K8 on enclosed inquiry slip ▲

NOW...two powerful *Tubar* DUMPERS engineered to keep bulk handling costs down

Uhrden's new **Tubar Dumper** is especially designed for bulk chemical handling. **Uhrden's Tubar Hi-Level Electro Hydraulic Dumper** is the "Work Horse" of dumpers—designed to provide a continuous flow of work from boxes, crates, cases, and industrial containers to the machine operator.

NEW TUBAR TWIN-CYLINDER DUMPER


THE TUBAR HI-LEVEL ELECTRO HYDRAULIC DUMPER

STANDARD PRODUCTION MODELS . . . OR BUILT TO YOUR SPECIFICATIONS
- *Empty heavy containers fast . . . easily . . . safely*
- *Versatile . . . compact . . . easy to operate*

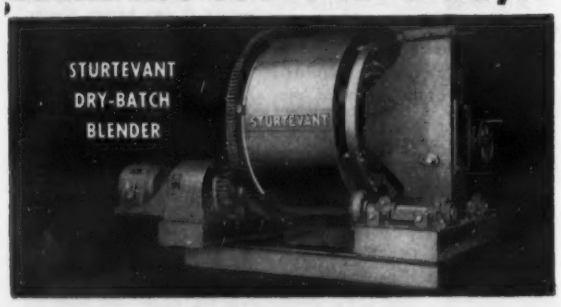
U-158-378

Write for data on Uhrden's Complete Line of Tubar Dumpers

Tubar DUMPER DIVISION
uhrden, inc.
DENNISON, OHIO
Tubar ASSURES QUALITY

▲ For more details circle NED-910 K8 on enclosed inquiry slip ▲

BLENDING COSTS cut 2 ways!



1. PRODUCTION SPEEDED UP BY 4-WAY MIXING
2. SHUT-DOWNS SHORTENED BY "OPEN-DOOR" DESIGN

Batches from 500 to 40,000 pounds are completely blended regardless of varying weights, densities or fineness of different ingredients. No dust loss!

Four different vertical and lateral mixing actions do the job in minimum time. Single lever control of single gate speeds loading and discharging.

"Open-Door" accessibility for quick, easy cleaning and maintenance *plus* 75-year-tested rugged construction add up to more output per machine-year.

Write for Bulletins on Sturtevant Batch Blenders and other custom-built equipment listed below. STURTEVANT MILL CO., 114 CLAYTON ST., BOSTON 22, MASS.

STURTEVANT
Dry Processing Equipment
The "OPEN-DOOR" to lower operating costs over more years
CRUSHERS • GRINDERS • MICRON-GRINDERS • SEPARATORS
BLENDERS • GRANULATORS • CONVEYORS • ELEVATORS

▲ For more details circle NED-911 K8 on enclosed inquiry slip ▲

New Literature & Catalogs

Proximity Control

Trimount Instrument Co., Electronics Div.—The Trimount Proximity Control, described in 4-page bulletin, can be used with a variety of nonconducting liquids, semisolids, and free-flowing granular materials. It will control high and low level, or is usable for differential level or interface control, and for limit switching.

▲ For more details circle NED-912 K8 on enclosed inquiry slip ▲

Regulated Power Supplies

Kepco Laboratories, Inc.—Catalog B587 deals with performance and application of transistorized, vacuum type, and magnetic tubeless voltage regulated power supplies. These packaged power units are available in capacities and output ratings to suit practically any need.

▲ For more details circle NED-913 K8 on enclosed inquiry slip ▲

Specialty Wire

Continental Steel Corp. — Standard and special shaped, coarse round, fine, and specialty wires in low and medium low carbon steel are subject of 12-page illustrated catalog "Manufacturers' Wire." In addition to listing sizes, finishes, grades, and tempers, book covers qualities and applications. Technical data are included for designers and users of steel wire.

▲ For more details circle NED-914 K8 on enclosed inquiry slip ▲

Heated Tanks & Pots

Sta-Warm Electric Co.—Bulletin C-1 contains 2 pages of information on electrically heated, thermostatically controlled cylindrical melters ranging in capacity from ½ to 200 gal. Largest units are equipped with heated valves. Mechanical agitation is optional. Also covered are 1 to 20-qt bench pots.

▲ For more details circle NED-915 K8 on enclosed inquiry slip ▲

Pipeline Expansion Joints

Badger Mfg. Co.—80-page catalog is descriptive of S-R pipeline expansion joints. Complete information is given for rating expansion joints subjected to axial or lateral movement, angular rotation, or a combination of these movements. Formulas and tables are included to calculate forces and bending movements developed in connected piping and equipment. Tables give dimensions and weights of expansion joints with 3 to 72-in. diameters. (Editors Note: This item appeared in the August issue of NED, but the company name was spelled incorrectly.)

▲ For more details circle NED-916 K8 on enclosed inquiry slip ▲

Positive Pressure Blowers

Dresser Industries, Inc., Roots-Connersville Blower Div.—Revised data and latest engineering information on Type AF rotary positive blowers are contained in 8-page Bulletin AF-258. Made in ¾ to 5-in. sizes with capacities up to 841 cfm and for pressures from vacuum to 10 psi, blowers are suited for a broad range of industrial and process applications.

▲ For more details circle NED-917 K8 on enclosed inquiry slip ▲

Closed-Circuit Industrial Television

Diamond Power Specialty Corp., Electronics Div.—Just how and where closed-circuit television is used successfully in industry is shown in 12-page Bulletin 2239. Case histories of safety, monitoring, control, and other applications are cited. Details of the various components which make up an industrial TV system are given.

▲ For more details circle NED-918 K8 on enclosed inquiry slip ▲

Drawing for Reproduction

"Drawing for Good Reproduction" is title of 32-page manual which stresses the importance of good draftsmanship and suggests techniques for improving reproduction. Written by Arthur H. Rau, drafting consultant of General Electric Co., it is designed for use by design and engineering departments. Price is $1. Published by the National Association of Blueprint & Diazotype Coaters, 1001 Connecticut Ave. N.W., Washington 6, D. C.

▲ For more details circle NED-919 K8 on enclosed inquiry slip ▲

How To Apply Fasteners

Russell, Burdsall & Ward Bolt & Nut Co.—Technical facts to help users obtain maximum economy and performance in the application of standard fasteners are set forth in 16-page pocket-size manual entitled "Helpful Hints." Selecting the right bolt, proper torque, calculating loading, tightening limitations, safety factors, threads, and protective coatings are but a few of the subjects discussed.

▲ For more details circle NED-920 K8 on enclosed inquiry slip ▲

PENCO'S NEW CHANNEL CLIP
BOLTLESS STEEL SHELVING

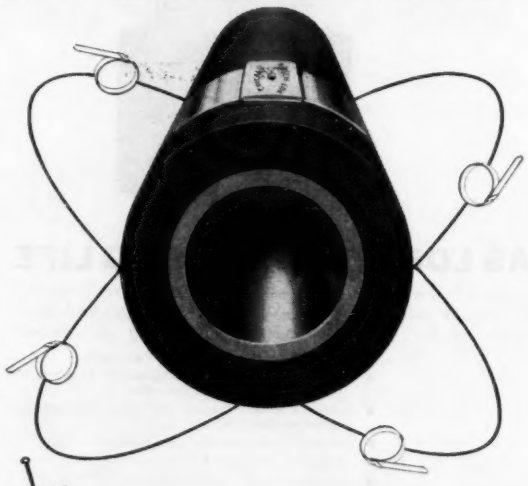
SAVES UP TO 50% OF INSTALLATION COSTS
- FASTER TO INSTALL
- QUICKER TO REARRANGE
- STRONGER
- PHOSPHATIZED FINISH
- COLOR CHOICE

NEW BULLETIN B-40 REQUEST IT!

ALAN WOOD STEEL CO.
PENCO DIVISION
214 BROWER AVE., OAKS, PA.

▲ For more details circle NED-921 K8 on enclosed inquiry slip ▲

IN ORBIT for a LIFETIME!



PUNCH-LOK
Hose Clamps

MR. LOK SAYS:
When a Punch-Lok clamp goes into orbit around a hose connection it's there to stay.

DOC PUNCH SAYS:
Tell the hose user it's a life-saver prescription for outer-space too.

NO SNAG! NO LEAKS!

NEW! from PUNCH-LOK

New K-45 Clamp-Master Kit now in all-steel carrying case finished in red baked-on enamel.

Tension-Air production hose clamping machine with clamp remover Model TA-1.

See your nearby Punch-Lok Distributor 8382

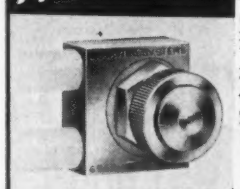
"The Sign of a GOOD Hose Clamp"

PUNCH-LOK Company

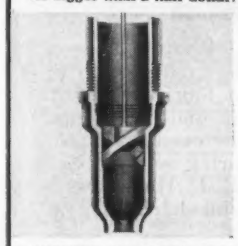
Dept. A, 321 N. Justine Street, Chicago 7, Illinois

▲ For more details circle NED-922 K8 on enclosed inquiry slip ▲

SPRAY NOZZLES ...THAT FIT INSTALLATION NEEDS



LIMITED SPACE? Here's a pneumatic atomizing nozzle no bigger than a half dollar.



Spraying Systems gives you better spray nozzle performance . . . plus a wide choice of physical nozzle shapes, sizes and assemblies. Shown here are three such typical nozzles. When the spray nozzle problem also includes installation and maintenance, perhaps we already have an easy solution. For information write for Catalog 24.

SPRAYING SYSTEMS CO.
3211 RANDOLPH STREET
BELLWOOD, ILLINOIS

NOZZLES INACCESSABLE? Vane of this FullJet nozzle is withdrawn through pipe for easy, remote cleaning.

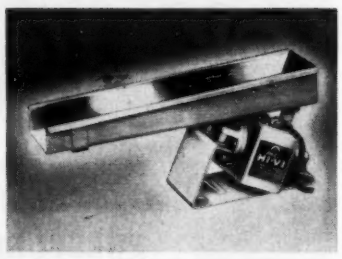
SIMPLIFIED WALL MOUNTING? Nozzle body acts as flange . . . fits any wall thickness. Perfect for pressurized chambers. →

▲ For more details circle NED-923 K8 on enclosed inquiry slip ▲

NEW HI-VI VIBRATORY FEEDER BY ERIEZ OFFERS MANY ADVANCED FEATURES!

- Totally - enclosed drive element
- Rustproof, long-life spring
- No rectifier needed
- More uniform feed
- Greater capacity than comparable physical size unit

(Pat. Pending)



Improved line of HI-VI electro-permanent magnetic vibratory feeders operate at 3600 CPM directly off an AC line—need no rectifier. Totally-enclosed drive element can't be damaged or lose efficiency due to contamination by moisture or foreign materials. Disc-shaped, glass fiber springs are rustproof; not subject to critical characteristics of steel leaf spring systems. And these new units provide greater capacity than any other comparable size feeders.

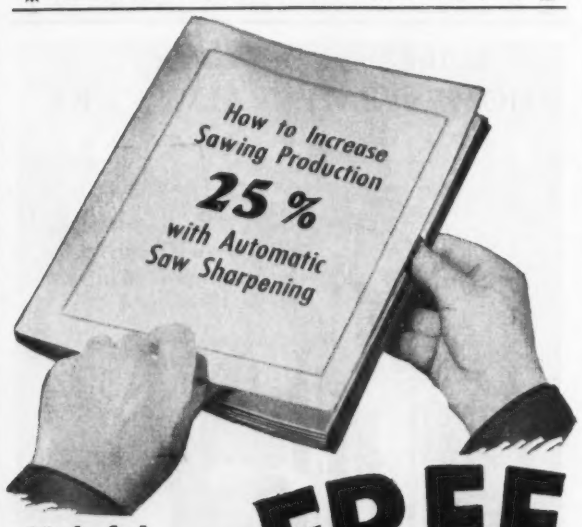
HI-VI Feeders provide a liquid-like flow to all types of bulk materials, variable from ounces to tons per hour. Units are lightweight, compact, easily installed. Almost silent operation; no sliding or rotating parts to wear. Low operating and maintenance costs. Lifetime-powered Alnico V magnet is the heart of the unit.

ERIEZ HI-VI VIBRATORY EQUIPMENT

Magnetic SEPARATION AUTOMATION VIBRATION equipment

For complete information on HI-VI Feeders, write to Eriez Mfg. Co., 80-KA Magnet Dr., Erie, Pa.

▲ For more details circle NED-924 K8 on enclosed inquiry slip ▲



Helpful 56 page book FREE

if you use saws send for this book

This free book is based on facts and experience from many years' use of Foley precision saw filing equipment in thousands of plants. It contains pictures and helpful data showing how firms have actually increased sawing production 25% to 40%, lengthened saw life, reduced breakage, produced better work, and have lowered maintenance costs (one firm reports an annual saving of $350). Book includes instructions illustrating how automatic sharpening can benefit you. Request Manual No. 100—no obligation.

FOLEY MANUFACTURING CO. • 3323 N.E. 5th St., Minneapolis 18, Minn.

▲ For more details circle NED-925 K8 on enclosed inquiry slip ▲

New Processes & Materials

VINYL METALS FINISH
applied in dry powder form

Developed for use in the Whirlclad fluidized finishing process, Corvel vinyl powders are now available for coating metals. Parts are preheated to a temperature above the flow point of the resin and dipped into a bed of dry fluidized powders which encapsulate the object and bond by fusion onto the metal surface. Cladding thicknesses from 10 to 50 mils are obtained in a single dip. Finish is tough, resilient, and resistant to corrosion by chemicals. Vinyls in various colors can be applied to lab or plating equipment, battery casings, as pipe linings, and on bus duct, conduit, and other electrical parts. Developed by **National Polymer Products, Inc.**, 125 N. Fourth St., Reading, Pa.

▲ For more details circle NED-926 K8 on enclosed inquiry slip ▲

SHOCK CONTROL PAD
protects equipment during shipping

Electronic equipment, business machines, computers, and large precision and electrical apparatus, either crated or uncrated, are protected during shipment by Type S Unisorb vibration and shock control pad. It can be used with a Unisorb cement which eliminates the need for bolting or lagging equipment to shipping cases, or it can be used with conventional bolting. The pad and cement withstand shear forces of 75 to 100 psi. Material is offered in roll or sheet form and can be cut to shapes and patterns on the job. Sample of pad and cement will be sent free by **Felters Co.**, Dept. GH, 210 South St., Boston 11, Mass.

▲ For more details circle NED-927 K8 on enclosed inquiry slip ▲

DECORATIVE ORGANIC FINISH
metallic and colored types offered

Where Permatron decorative organic finish is being used to simulate a metal, the finished product is virtually indistinguishable from the metal being duplicated. The durable one-coat finish does not tarnish and requires no maintenance. It is available in brass, gold, copper, bronze, and a variety of colors. It is applied without pretreatment by spray, dip, or roller coating to any chemically clean, polished metal. After application, it is baked at temperatures between 400° F for 7 min and 325° F for 15 min. Suited for architectural sections, automotive and aviation parts, furniture, hardware, instrumentation, and other uses, the finish resists salt spray, fading, impact, chemicals, wide temperature extremes, and crazing. It can be post formed. Made by **Permatron Co.**, Dept. A-22, 2117 E. York St., Philadelphia 25, Pa.

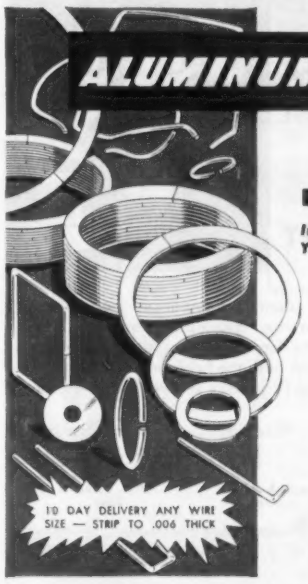
▲ For more details circle NED-928 K8 on enclosed inquiry slip ▲

PEELABLE STOP-OFF PLASTIC
masks parts for partial plating

Seal-Stop peelable butyrate plastic coating effectively reduces the cost of masking metal parts for partial plating. Parts are dipped in the molten Eastman Chemical plastic which solidifies within 60 sec. Areas to be plated are quickly stripped of the plastic by peeling or trimming. After plating, the remaining coating is stripped off, rinsed, and returned to the melt tank for reuse. The coating is nonexuding and will not contaminate the plating solution or leave any residue on the part when removed. Other uses include protective packaging, potting compound, and as masking aid for painting and metal finishing. Made by **Seal-Peel, Inc.**, Dept. NED, 775 Stephenson Highway, Royal Oak 3, Mich.

▲ For more details circle NED-929 K8 on enclosed inquiry slip ▲

ALUMINUM Brazing?



LUCAS-MILHAUPT
SOLDER PREFORMS

In Sizes And Shapes To Do Your Brazing Job Better

1 NOTCH COIL RINGS — No Tangling Problems
2 EDGEWOUND WASHERS — No Blanking Scrap Losses
3 BLANKED WASHERS — Close Tolerance From Thin Sheet
4 SPECIAL SHAPES — Rectangles, Ovals, U-clips, Segments and Many Others

AVAILABLE IN THESE ALCOA ALLOYS
718 Brazing Wire and Sheet
716 Brazing Wire
713 Brazing Sheet

Write For 16 Page Booklet On Better Brazing

LUCAS MILHAUPT Engineering COMPANY
5070 South Lake Drive, Cudahy, Wis.

▲ For more details circle NED-930 K8 on enclosed inquiry slip ▲

FREE clerks for other duties . . . . — obtain EXACT COST DATA automatically with CALCULAGRAPH

Now, automatically, you can have production records and exact cost data more accurately, more efficiently and more quickly when you include Calculagraphs in your time and cost system. You eliminate costly human errors because Calculagraph—and only Calculagraph—*computes* and *prints* ELAPSED TIME *free*.

Look at these BIG CALCULAGRAPH advantages—

- Will fit into your PRESENT SYSTEM *without* costly changes
- Uses *any type* of job card
- One machine can serve an *entire* department
- Is a self-contained unit—needs NO MASTER CLOCK
- Computes ELAPSED TIME to the *minute* or *tenth of an hour*

You'll find that Calculagraph can *save clerical time, reduce costs* and give you necessary cost information *faster and* with *100% accuracy*. Investigate Calculagraph NOW.

Write for complete information today

Agents in Principal Cities

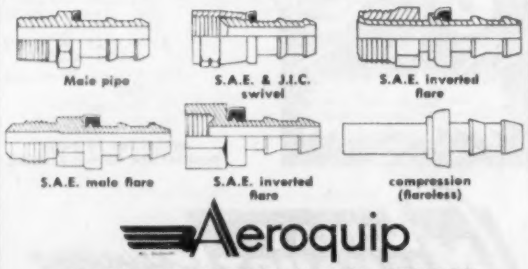
CALCULAGRAPH Company
307 Sussex Street • Harrison, New Jersey

MANUFACTURERS OF ELAPSED TIME COMPUTERS FOR OVER 65 YEARS

▲ For more details circle NED-931 K8 on enclosed inquiry slip ▲

AEROQUIP
SOCKETLESS
FITTINGS and HOSE
Feature
LOW COST,
QUICK ASSEMBLY

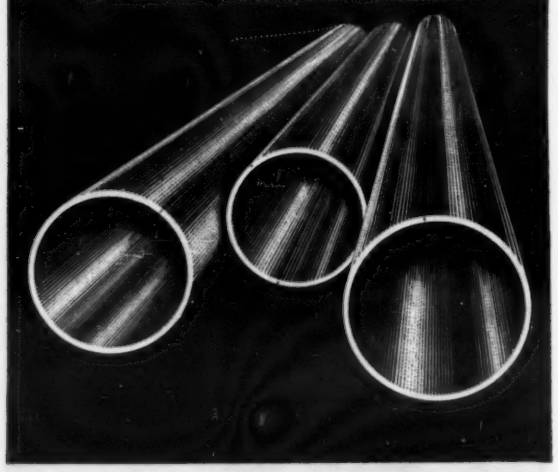
Low cost hose lines for plant maintenance, mobile and industrial equipment can be assembled quickly, anywhere, using Aeroquip low pressure hose and patented* SOCKETLESS Fittings. Just push the hose on the fitting... it stays on. Call your Aeroquip Distributor or write us for details.



Aeroquip
AEROQUIP CORPORATION, JACKSON, MICHIGAN
INDUSTRIAL DIVISION, VAN WERT, OHIO • WESTERN DIVISION, BURBANK, CALIFORNIA • AEROQUIP (CANADA) LTD., TORONTO 19, ONTARIO
*Covered by U.S. Patent No. 2,805,088 and corresponding foreign patents and patent applications

For more details circle NED-932 K8 on enclosed inquiry slip

We'll make it from
ALUMINUM!



FORMED AND WELDED ALUMINUM TUBE

Need formed and welded tube? Alcoa's Jobbing Division can form and weld aluminum tube in a wide range of sizes to meet your requirements. Complete engineering-fabricating facilities, backed by the world's largest research organization. Also, many standard products: shipping drums, vessels, tote boxes, pallets, phone booths, farm gates, electronic cabinets, process equipment, welded tubes, tanks.

SEND FOR FREE BOOKLET TODAY

Fully illustrated 16-page booklet describes in detail Alcoa's unmatched facilities for welding, rolling, brake forming, bending, spinning, finishing, testing, complete engineering-fabricating.

ALCOA ALUMINUM
Your Guide to the Best in Aluminum Value

ALCOA THEATRE
Fine Entertainment
Alternate Monday Evenings

ALUMINUM COMPANY OF AMERICA
1951-K Alcoa Building, Pittsburgh 19, Pennsylvania
Please send my free copy of Alcoa Aluminum Fabricating Facilities.
NAME _____ TITLE _____
COMPANY _____
STREET ADDRESS _____
CITY _____ STATE _____

For more details circle NED-933 K8 on enclosed inquiry slip

New Literature & Catalogs

Photoelectric Controls

Electronics Corp. of America, Photoswitch Div.—Specifications, descriptive data, operational charts, and a selector guide for photoelectric systems for industrial control use are content of 24-page illustrated Bulletin PA 561, "Proved Answers to Successful Automation." These include long range protection against intrusion, counting, sorting, inspecting, registration, and high temperature measurement.

For more details circle NED-934 K8 on enclosed inquiry slip

Short Run Stampings

Federal Tool & Mfg. Co.—"More for Your Short Run Stamping Dollar" is title of 6-page Folder 301 which describes the production facilities, available materials, economies, and design tips for stampings produced by this company. Analysis of costs for typical parts is included.

For more details circle NED-935 K8 on enclosed inquiry slip

Coil Winding Machines

Geo. Stevens Mfg. Co.—Virtually any desired coil can be rapidly and economically produced by the 44 coil winding machines described and illustrated in 62-page Catalog 59. Also covered are a wire scraper, wire insulating equipment, winding formulas, and 14 pages of tensions, counters, tailstocks, cams, gears, and accessories.

For more details circle NED-936 K8 on enclosed inquiry slip

Power Supplies

Electronic Research Associates, Inc.—Line of power supplies, including transistorized inverters and converters, Transpac miniaturized power packs, power supplies for transistor applications, high current units, transistor-regulated direct current units, frequency changers, and related equipment are described and illustrated in 6-page Catalog 111.

For more details circle NED-937 K8 on enclosed inquiry slip

Low Voltage Switching Systems

Touch-Plate Mfg. Corp.—Sections of 18-page illustrated brochure 'Low Voltage Switching Systems" are devoted to designing a system, architect's specifications, planning the installation, installing, trouble shooting, and basic components. Various uses of master-controlled lighting are outlined.

For more details circle NED-938 K8 on enclosed inquiry slip

Explosive Valves & Latch Pins

Conax Corp.—How explosive valves operate is explained in word and diagram in 16-page Catalog 5808-XV. Standard and special valves, explosive latch pins, explosive actuators, thermocouples, and pressure sealing assemblies are described. Specifications of all units are included, along with prices.

For more details circle NED-939 K8 on enclosed inquiry slip

Tubular Products, Fittings & Flanges

Babcock & Wilcox Co., Tubular Products Div.—"Guide to Specifications & Applications" is 4-page folder which presents data on tubular products, fittings, and flanges in various grades of steel. Grade identification is given for a number of applications.

For more details circle NED-940 K8 on enclosed inquiry slip

Automatic Controls

Barber-Colman Co.—Line of automatic controls for heating, ventilating, and air conditioning systems is described in 52-page illustrated Catalog 26. Covered are thermostats, pressure controls, humidistats, motor-operated valves, temperature regulators, motor operators, ventilator controls, hot water controls, electronic controls, control centers, and accessories.

For more details circle NED-941 K8 on enclosed inquiry slip

Strapping & Strapping Equipment

A. J. Gerrard & Co.—52-page illustrated "Handbook of Strapping and Materials Handling Equipment" describes light and heavy duty flat steel strapping; oval and round steel strapping; pressure-sensitive tape; and automatic, semiautomatic, power, and manual strapping equipment. Detailed data are included.

For more details circle NED-942 K8 on enclosed inquiry slip

Power Presses

Federal Machine & Welder Co.—20-page Bulletin 52151, descriptive of several types of WARCO power presses, includes fundamentals of press working of metals. Sketches, tables, and charts are used. Bulletin will assist the user in selecting the type press most appropriate for his work.

For more details circle NED-943 K8 on enclosed inquiry slip

clean lubrication

300°F to 1,000°F

FOR 300°F. UP: Three types of Hi-Temp oils cover temperatures up to 1,000°F. Here's clean, dependable lubrication that keeps wear to a minimum under the most difficult high temperature conditions. No carbon build-up. No bearing seizure. Get new bulletin by writing E. F. Houghton & Co., 303 W. Lehigh Ave., Philadelphia 33, Pa.

HI-TEMP OILS
... products of
E. F. HOUGHTON & CO.
PHILADELPHIA • CHICAGO • DETROIT • SAN FRANCISCO
Ready to give you on-the-job service...

For more details circle NED-944 K8 on enclosed inquiry slip

CUT FASTENING COSTS WITH
Double-Face

PRESSURE SENSITIVE TRANSFER FILM

An instant bonding medium for the temporary or permanent bonding of a full variety of porous and non-porous materials. Double-Face is a translucent adhesive film reinforced by a non-woven tissue and supported for shipping handling and storage by a release-coated protective paper. More versatile than a single or double coated tape.

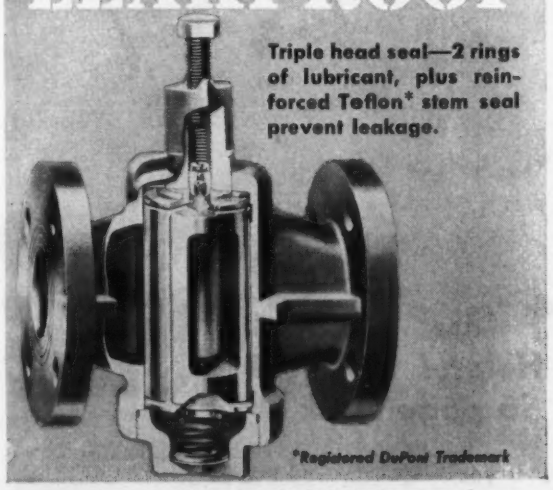
- 72 linear yard rolls in widths ⅛" up to 54"
- Conforms to irregular surfaces
- Permits better bond of porous surfaces
- Can be slit or die cut with release paper in place
- High-speed applicator available
- Dry-edge release paper available in some widths

Write for free literature and sample.

ANGIER ADHESIVES
INTERCHEMICAL CORPORATION
Finishes Division
120 Potter St., Cambridge 42, Mass. Midwestern Plant: Huntington, Indiana

For more details circle NED-945 K8 on enclosed inquiry slip

In the spots that count . . .
HOMESTEAD® VALVES ARE
LEAKPROOF



Triple head seal—2 rings of lubricant, plus reinforced Teflon* stem seal prevent leakage.

*Registered DuPont Trademark

Controlled, pressurized lubrication system forces full lubricant seal around ports, and over all sealing surfaces—positively prevents sticking. Write today for full details.

HOMESTEAD VALVE MANUFACTURING COMPANY
P.O. Box 84 • Coraopolis, Pa.

For more details circle NED-946 K8 on enclosed inquiry slip

Comparative tests prove Norgren AIR LINE FILTERS SAVE MAINTENANCE TIME

MAKE	NORGREN	A	B	C
Loose Parts to Disassemble	4	9	15	13
Tools Required for Maintenance	None	Wrench	Wrench & Screw-driver	Screw-driver
Tool Operations Required	None	2	10	16

If it's Norgren... It's Dependable.

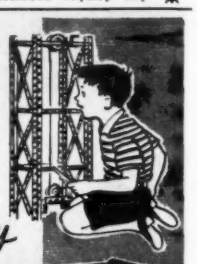
WRITE FOR DESCRIPTIVE LITERATURE **C. A. NORGREN CO.**

3405 SOUTH ELATI STREET • ENGLEWOOD, COLORADO

▲ For more details circle NED-947 K8 on enclosed inquiry slip ▲

BUILD INFRA-RED OVENS

As Easy as Erector Set Assembly



with driQuik

OVENS ANY SIZE OR SHAPE

INTERLOCKING SECTIONS

These pre-engineered sections are completely wired, with easy-to-assemble structural parts for permanent or mobile ovens. Or, if you prefer, we will build ovens to your specifications.

LOW INITIAL COST either way and maintenance costs are practically zero because these units have ceramic type generators and there are no bulbs or sockets to burn out. DARK BURNING—NO high intensity light injurious to eyes. Write today for literature giving complete data.

driQuik DIVISION — DRY CLIME LAMP CORP. GREENSBURG, INDIANA

▲ For more details circle NED-948 K8 on enclosed inquiry slip ▲

HIGH VISIBILITY—RUGGED CONSTRUCTION

Lite-TUFF boxes are made from clear, rugged Tenite II and have stainless steel hinges. Standard boxes available in many sizes and compartment arrangements. Uses innumerable!

Send for Plot Plan Sheets which show specifications of Standard Boxes.

SHOE FORM CO. INC.

Dept. B-108 Auburn, New York

▲ For more details circle NED-949 K8 on enclosed inquiry slip ▲

New Processes & Materials

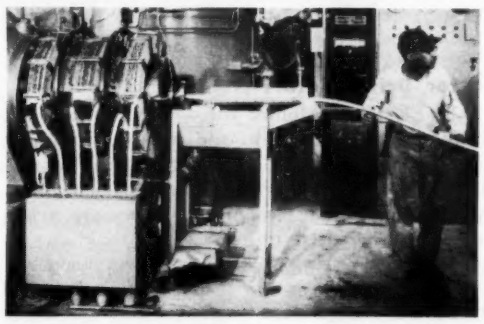
PLASTIC-FELT MATERIALS three types in production

Nonwoven felt and certain new plastics and synthetics are combined in a series of materials called PlastiFelts. Three styles are offered on a production basis and other combinations on a pilot run basis. N-50 treated all-wool felt encases each fiber in a protective sheath of nylon for extra wear, abrasion and friction resistance, and high strength without increased density. Second style uses a polyethylene film surface to prevent surface fiber shedding, provide an oil and grease resistant surface, and stop air travel through the felt in mechanical applications. Teflon coated felt has low friction and high heat resistance, with the Teflon forming a self-lubricating bearing surface in rotating equipment. Made by **Felters Co.**, Dept. GH, 210 South St., Boston 11, Mass.

▲ For more details circle NED-950 K8 on enclosed inquiry slip ▲

CONTINUOUS-MOLDED HOSE has uniform size and quality

Use of a continuous lead extrusion machine permits the production of continuous molded rubber hose. Uniformity of size, finish, and quality are assured by



this production method. Hose is shipped in one continuous length on the reel, thus minimizing waste. Various sizes are available from **H. K. Porter Co.**, Quaker Rubber Div., 4905 Comly St., Philadelphia 24, Pa.

▲ For more details circle NED-951 K8 on enclosed inquiry slip ▲

Forged Steel Unions & Fittings

Clayton Mark & Co.—Simplified catalog on "Carbon and Alloy Forged Steel Unions" presents complete information on construction. The 16-page loose-leaf folder specifies Petro, Handlebar, Hydro, Mark, and Orifice unions; check valves; and forged steel fittings ranging from 2000 through 6000 lb CWP.

▲ For more details circle NED-952 K8 on enclosed inquiry slip ▲

AN ECONOMY-PRICED **TABLE-TOP CONVEYOR** for sorting, assembling, packaging, inspecting

SERIES T44

BELT

VERSA-VEYOR

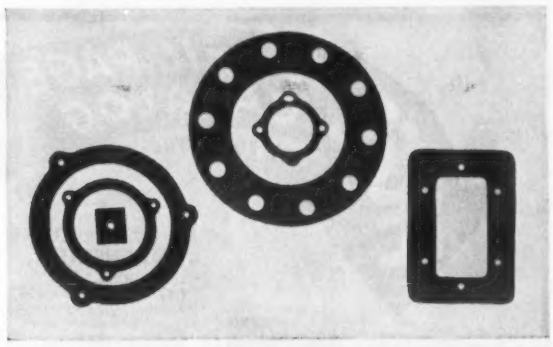
A smooth, dependable, quietly operating table-top conveyor with low initial and maintenance costs. Extensions can be added for over-all length of 81 feet. Available with or without side leaves... adjustable height. Rigid, enameled steel frame with durable 3-ply belt in widths from 6 to 24 inches. Choice of fixed belt speed within 3 to 100 F.P.M. range or variable speeds with 3-to-1 ratio. Moves packages and pieces at lowest cost.

WRITE FOR COMPLETE INFORMATION ON BELT CONVEYORS

THE BELT CORPORATION

8888 Stahl Road, Orient, Ohio

▲ For more details circle NED-953 K8 on enclosed inquiry slip ▲



WILBOW... A Dependable Source for Punched Rubber Products

WILBOW can produce, to your specifications, special flat shapes punched or die-cut from natural or synthetic rubber sheet stocks. There is practically no limit to the size, shape or description of parts which WILBOW can produce by this method. Thickness is governed by the hardness, toughness and degree of concavity allowable on cut edges.

Let us know of your punched rubber products requirements. Our engineers will be pleased to work with you and make recommendations.

Investigate WILBOW slab or sheet rubber. These can be furnished in any grade and hardness of natural or synthetic rubber stock.

Send for New WILBOW Catalog It will become your handbook of rubber goods

Wilbow

The WILLIAMS-BOWMAN RUBBER Co.

1954 South 54th Avenue • Cicero 50, Illinois • (Chicago Suburb)

Mfrs. of molded, punched, extruded and cut rubber goods. Specialists in producing rubber covered rolls, silicone rubber parts and bonding rubber to metal

▲ For more details circle NED-954 K8 on enclosed inquiry slip ▲

HERE'S the BRAKE

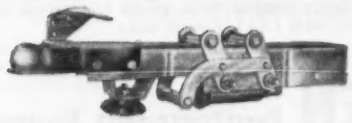
For 8", 9" and 12" WHEELS

YOU'VE BEEN WAITING FOR!

DICO

INDUSTRIAL BRAKES

With DICO *Surg-o-Matic* Actuator



For Boat and Utility Trailers

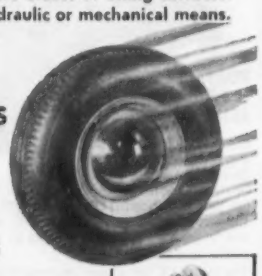
AN ENTIRELY AUTOMATIC OIL-HYDRAULIC BRAKE SYSTEM. NO CONTROLS REQUIRED ON TOWING VEHICLE.

ALSO IDEAL FOR OTHER INDUSTRIAL APPLICATIONS

7" diameter drums with 31 square inches of lining surfaces. Can be activated by standard hydraulic or mechanical means.

DICO

DEMOUNTABLE WHEELS Have 5-Bolt Hubs A PROVEN AUTOMOTIVE PRACTICE



ONE HUB FITS ALL WHEELS

4.80/4.00x8	2.50"	Standard Rim
4.80/4.00x8	3.75"	Wide Base Rim
5.00x8	3.75"	Standard Rim
5.70/5.00x8	4.25"	Wide Base Rim
5.50x8	4.25"	Wide Base Rim
6.90/6.00x9	4.00"	Standard Rim
4.80/4.00x12	4.00"	Wide Base Rim
5.30/4.50x12	4.00"	Wide Base Rim
6.00x12	4.00"	Wide Base Rim

Write for complete information on DICO'S new industrial brake and Surg-o-matic actuator. Also let DICO help you with your wheel applications.

DICO DES MOINES 5, IOWA

▲ For more details circle NED-955 K8 on enclosed inquiry slip ▲

FREE NEW-16 PAGE CATALOG
WRITE FOR YOUR COPY TODAY

JIG AND FIXTURE COMPONENTS
LATCH BOLTS
CAST IRON HAND KNOBS
ALUMINUM HAND KNOBS
QUARTER TURN SCREWS
SHOULDER SCREWS
JIG FEET (3 TYPES)
SPHERICAL WASHERS
FIXTURE KEYS
KNURLED HEAD SCREWS
TOGGLE SHOE CLAMPS & V-PADS

HOLD DOWN AND CLAMPING TOOLS
T-NUT & STUD SETS
STEP BLOCK & CLAMP SETS
FLANGED NUTS
CUT THREAD STUDS
TEE NUTS
COUPLING NUTS
ADJUSTABLE STEP BLOCKS
STRAP CLAMPS (PLAIN & STEP TYPE)

CATALOG INCLUDES TRACING TEMPLATES

Northwestern
127 HOLLIER AVE., DAYTON 3, OHIO

For more details circle NED-957 K8 on enclosed inquiry slip

"ONE SOURCE"...
H. S. STEEL TANTUNG CARBIDE ABRASIVES DIAMOND

FOR HIGH RPM ROTARY CUTTING TOOLS

To meet your production or toolroom grinding, milling, or finishing operation, look to PRECISE as one source for your HIGH RPM rotary cutting tool requirements. PRECISE tools available in H. S. Steel, Tantung, Carbide, Abrasives, and Diamond, in all sizes and shapes — highest quality guaranteed for faster, more efficient metal removal and improved finishes. Send for new 48-page "One Source" Tool Manual presenting the lastest developments in rotary tools.

Precise
Power Quills Grinder Millers Milling Machines
Accessories Cutting Tools Vapor-Lub Cooling Systems
Quality and Precision Since 1882

PRECISE PRODUCTS CORPORATION, 3752 Blue River Road, Racine, Wisconsin, U.S.A.
Branch Plant: Precise, G. m. b. H., Duesseldorf, Germany

For more details circle NED-958 K8 on enclosed inquiry slip

GREEN Pantograph Engravers
ELIMINATE DELAYS!
Keep the work in your own plant.

PORTABLE 40-POUND BENCH-MODEL 106
Famous 2 or 3-dimensional engraver, successfully used by thousands, features 5 positive, accurate pantograph ratios. Versatile ball bearing spindle has three speeds up to 14,000 rpm; height of pantograph and position of cutter are continuously adjustable; one copy carrier (supplied) accepts all standard master type sizes.
The Model 106 has proven incomparable for speed and accuracy . . . yet reasonably priced.
Cutter grinders, rotary tables, master letters, compound slides, name plates and all required accessories. For complete information, write to

MODEL D2 HEAVY-DUTY 2-DIMENSIONAL
• 575 pounds — rigid, sturdy, precise
• Vertical adjustment of copy table automatic with Pantograph
• Unobstructed on three sides to take large work
• Micrometer adjustment for depth of cut
• Ball-bearing construction throughout — super-precision ball bearing spindle
• Spindle speeds up to 26,000 rpm for engraving or machining modern materials
• Ratios 2 to 1 to infinity master copy area 25" x 10"
• Vertical range over 10"

GREEN INSTRUMENT COMPANY, INC.
375 PUTNAM AVENUE, CAMBRIDGE 39, MASS.

For more details circle NED-959 K8 on enclosed inquiry slip

New Literature & Catalogs

Lawn Hose Goods

H. B. Sherman Mfg. Co.—A complete line of Lawn Hose Goods is catalogued in Bulletin H59. Products described include lawn sprinklers, hose reels, nozzles, hose fittings, clamps, air nozzles, barrel faucets, relief valves, fusible plugs, and grease cups.

For more details circle NED-960 K8 on enclosed inquiry slip

Shop Equipment

Standard Equipment Co.—Practically everything for shop maintenance as well as many production items are included in 48-page Catalog JJ. Specifications and prices are given for shelving, racks, storage bins, shop boxes, workbenches, chairs and stools, work stands, hand and power trucks, wardrobe equipment, safety signs, furnaces and ovens, conveyors, shipping room equipment, and hundreds of other products.

For more details circle NED-961 K8 on enclosed inquiry slip

Throwaway Carbide Cutters

McCrosky Tool Corp.—Bulletin 582 on milling cutters which use throwaway type carbide inserts presents dimensions, available types, and performance data on these tools. Both standard and special cutters are described in this 8-page booklet.

For more details circle NED-962 K8 on enclosed inquiry slip

Label Imprinting Equipment

Weber Addressing Machine Co., Weber Marking Systems Div.—An efficient method for minimizing the cost of labels and tags is outlined in Bulletin A-123. Labels and tags are custom-printed on the job with manual or automatic equipment which uses a low-cost touch-stenciling system.

For more details circle NED-963 K8 on enclosed inquiry slip

Agitator Drive Motors

U. S. Electrical Motors Inc.—Vertical gear motors in ratings from 3 to 30 hp and with outputs from 25 to 280 rpm are designed to power mixing equipment and agitators for process operations. Uniclosed, totally enclosed, and explosionproof types are available, as are variable speed units.

For more details circle NED-964 K8 on enclosed inquiry slip

Cutting Oil Reclaimers

Leon J. Barrett Co.—Centrifugal oil extractors as well as complete systems for recovery and reconditioning of cutting oils are detailed in 4-page bulletin entitled "Recover 99½% of Your Cutting Oil."

For more details circle NED-965 K8 on enclosed inquiry slip

Design of Water Heating Systems

Cleveland Heater Co.—Contained in illustrated reference book are instructions, tables, and charts to simplify the design, specification, and purchase of large volume water heating systems. Specifications are given on automatic underfired gas water heaters for industrial and commercial use.

For more details circle NED-966 K8 on enclosed inquiry slip

Hydraulic Flow Regulators

Waterman Engineering Co.—16-page illustrated Catalog 1000 deals with full and limited range adjustable and factory-set mixed flow pressure compensated flow regulators for hydraulic power systems. A wide range of sizes and types are described for pressures up to 3000 psi and with controlled flow rates from 0.1 to 100 gpm.

For more details circle NED-967 K8 on enclosed inquiry slip

High Frequency Induction Heating

Magnethermic Corp.—12 pages of technical information comprise Bulletin HF-58-6 on high frequency induction heating equipment. Included are pictures and data on units ranging in output to 350 kw, as well as guidance on the use of induction heating for heat treating, annealing, brazing, forging, heating, and shrink fitting. These motor-generator type units deliver 1000, 3000, and 10,000 cycle frequencies.

For more details circle NED-968 K8 on enclosed inquiry slip

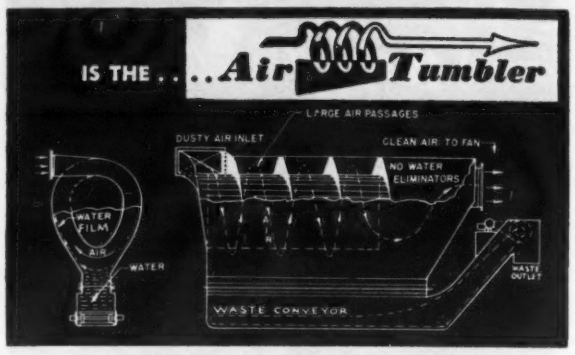
Basic Limit Switches

Minneapolis-Honeywell Regulator Co., Micro Switch Div.—32-page revised edition of Catalog 62c describes complete line of basic Micro Switches for industrial and commercial applications. Among the new switches detailed are a high-precision roller lever, an adjustable actuator, and a pulse switch. Also described are actuators, mounting brackets, and related accessories. Specifications, dimensions, operating characteristics, and other data aid in engineering and application.

For more details circle NED-969 K8 on enclosed inquiry slip

The MASTER of DUST in INDUSTRY

IS THE . . . . Air Tumbler



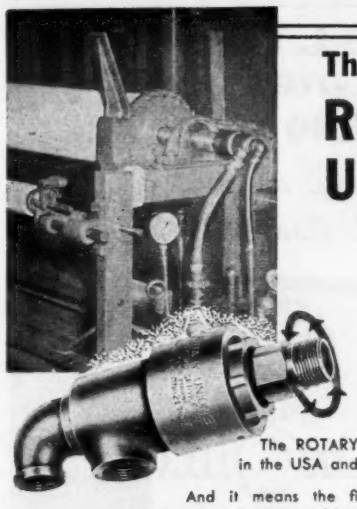
SIMPLE—DEPENDABLE—NO FIRE HAZARD
HIGH EFFICIENCY—CONSTANT CAPACITY
LOW HUMIDIFICATION—LOW OPERATING COST

More than one million CFM in ONE plant

Write for Bulletin No. 581. Address:

DUST SUPPRESSION & ENGINEERING CO.
P. O. BOX 67 • LAKE ORION, MICHIGAN

For more details circle NED-970 K8 on enclosed inquiry slip



The ROTARY UNION
Reg. U. S. Pat. Off.
Wherever Rotating Connections are Required

The ROTARY UNION is patented in the USA and Foreign Countries.

And it means the finest, longest lasting rotating joint in the world . . . the high speed, high pressure, positive mechanical seal which is self-aligning and self-adjusting. The ROTARY UNION will save you money on rubber and plastic equipment, flake rolls, grain dryers, ball mills, calenders, printing and coating machinery, and on any other revolving equipment which must be heated or cooled . . . so be sure to specify the ROTARY UNION.

Write for Bulletin 700D

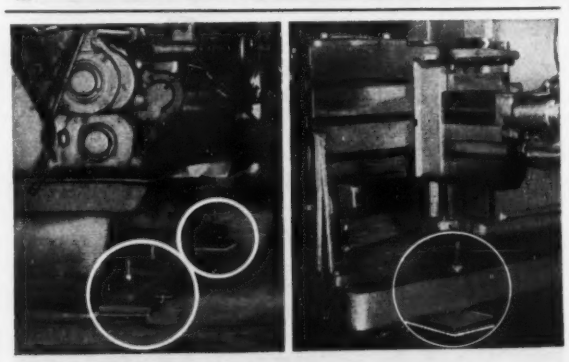
Permits Field Repair

"Where Good Connections Count"®

Baltimore, Camden, N. J., Cleveland, New York, Chicago, Los Angeles, Providence, Montreal, Toronto

PERFECTING SERVICE CO.
(Home Office and Factory)
332 Atando Ave. Charlotte, N. C.

For more details circle NED-971 K8 on enclosed inquiry slip



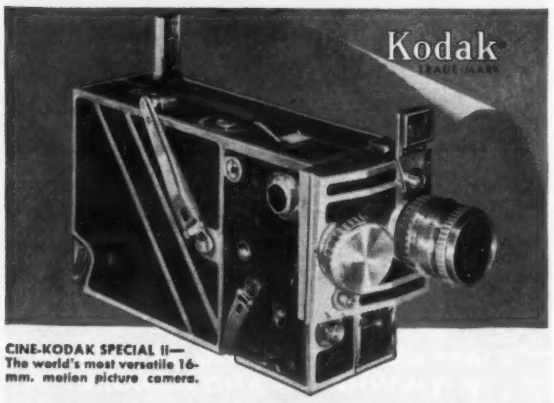
"UNISORB LEVEL-RITES CUT MACHINE MOUNTING TIME BY 75%!"
SAYS DAKE CORPORATION

New Unisorb Level-Rite Mounts are providing vital money-saving benefits for plants. Dake Corporation — moving machine tools into their new Grand Haven, Michigan plant — found they saved approximately 75% in mounting time. Plus . . . machines have less vibration, are quieter, can be quickly and easily leveled at any time and are always ready for relocation.

Get these savings for your plant! Try Unisorb on special Trial Offer — if not satisfied your money will be refunded. Write or call today.

UNISORB DIVISION OF THE FELTERS COMPANY
224 SOUTH ST., BOSTON 11, MASS.

For more details circle NED-972 K8 on enclosed inquiry slip



CINE-KODAK SPECIAL II—The world's most versatile 16-mm. motion picture camera.

Make movies that work for you!

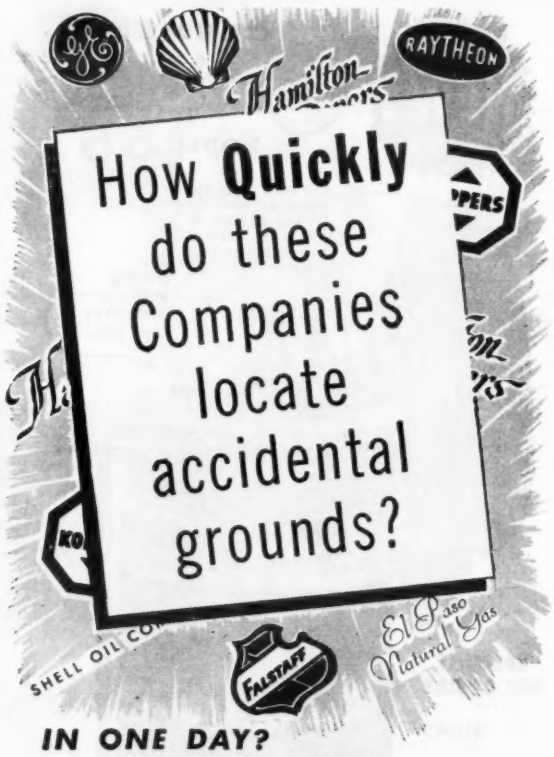
In almost every industrial activity—engineering, manufacturing, employee training, research, safety and methods evaluation—in-plant movies are the fastest, easiest, and most effective method for putting across your story.

And for on-the-job movie making, many leading industrial companies have chosen the Cine-Kodak Special II Camera. It has the versatility to handle almost any type of job. Yet its simplicity of operation enables you to get high-caliber results almost as easily as taking home movies.

WRITE FOR FREE BOOKLET, V1-3, describing the Cine-Kodak Special II.

EASTMAN KODAK COMPANY, Rochester 4, N. Y.

For more details circle NED-973 K8 on enclosed inquiry slip



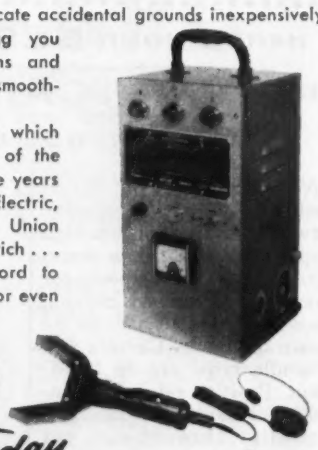
IN ONE DAY? THREE DAYS? ONE WEEK?

Actually one plant engineer reports that the Brunt Faultfinder enabled him to locate in twenty minutes a ground that previously, in an almost identical case, took three days.

The Brunt Faultfinder can save more than it costs the first time you use it.

Its use enables you to locate accidental grounds inexpensively and fast . . . protecting you against costly shutdowns and guaranteeing continued smooth-running production.

Among the many firms which have proven the worth of the Brunt Faultfinder over the years are U. S. Steel, General Electric, General Motors, Ford, Union Carbide and B. F. Goodrich . . . firms which cannot afford to have production halted for even one hour.



How Much Production Time Can You Afford to Lose?

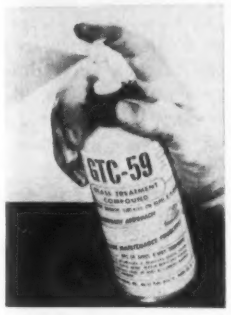
Write Today For All The Facts!

PARR MANUFACTURING CORP.
WRITE TO
46N AUSTIN STREET
NEWARK 2, NEW JERSEY

For more details circle NED-974 K8 on enclosed inquiry slip

New Processes & Materials

GLASS-PLASTIC CLEANER
sprayed from despensing container



Cleaning and degreasing in one operation, GTC-59 cleaning compound is readily applied to glass, plastic, enamel, chrome, marble, or other surfaces from its spray type container. Usable on delicate equipment, it contains no abrasives or caustics. It cancels static fields which attract dirt and dust. Surface is kept free of carbon dust build-up. It is available in 6, 16 and 32-oz containers, and in gallon and drum quantities. Free sample will be sent to industrial users. Made by **Beaver Laboratories, Inc.**, Dept. NEDI, 187-61 Hollis Ave., Jamaica 23, N. Y.

For more details circle NED-975 K8 on enclosed inquiry slip

EPOXY RESINS
four types have varied uses in electrical and electronic equipment

Each of four new epoxy resin systems is suited for specific applications in various fields. PRH 308 Class H single component thixotropic system, composed of Resin 21, incorporates a curing agent which eliminates need for mixing and weighing. This system is for end-capping field coils of high temperature traction motors.

PRH 400 flexible, solvent-based coating is used as a protective coating on printed circuits and electrical and electronic components, and may be used as a metal, plastic, ceramic, or concrete surface coating. It will cure at room temperature, but requires a moderate heat cure for optimum properties.

PRH 401 single component adhesive is a fluid, heat-curing system used for bonding metal to metal, such as laminated iron in transformers and electric motors. PRH 402 single component varnish is used as a protective coating on metal parts. Viscosity of solvent-based PRH 400, 401, and 402 types can be controlled by adding or evaporating the solvent. They can be dip, brush, or spray applied. Made by **Permacel**, Dept. E, New Brunswick, N. J.

For more details circle NED-976 K8 on enclosed inquiry slip

GROUTING MATERIAL
chemical resistant type is strong

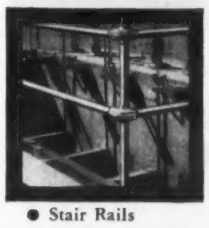
High compression strength is offered by No. 648 grouting material, developed for grouting machinery where vibration and operating conditions are unusually severe. It is rapid-hardening, has good chemical resistance, and has high grout-to-metal bonding strength. Tensile strength is 1950 psi, or almost five times that of concrete. Material also has good impact strength and abrasion resistance, virtually no shrinkage, and is impervious to oils. It is formulated from a modified resin and inert fillers, plus hardeners, and may be poured in depths up to 6 in. at one time. Made by **Ceilcote Co.**, 4838 Ridge Rd., Cleveland 9, Ohio.

For more details circle NED-977 K8 on enclosed inquiry slip

CORROSION-RESISTANT PAINT
line now affords variety of colors

Red, blue, light gray, dark gray, green, brown, ivory, and yellow colors, as well as aluminum are now available in the Chem-Rem acid and alkali resistant paint line. Special matched shades and black are also available. Paint will protect exterior and interior metal, masonry, and wood surfaces and withstands destructive effects of acetic, hydrochloric, and dilute sulphuric acids. It also resists bleaching solutions, dilute caustic soda, ammonia, and other alkalines. Surface is elastic and impervious to oil, gasoline, and moisture. Applied by brush, spray, or dip methods, paint dries to touch in 3 hr and sets in 10 hr. Made by **Speco, Inc.**, Dept. RSA, 7308 Associate Ave., Cleveland 9, Ohio.

For more details circle NED-978 K8 on enclosed inquiry slip



- Stair Rails
- Machine Guards
- Safety Railings
- Scaffolding
- Portable Guards

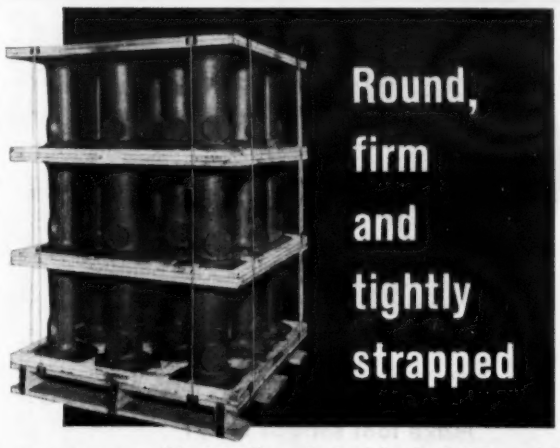
WRITE FOR BULL. 17E

No Threading — No Welding

Any man in your shop or maintenance department can build sturdy safety railings with NU-RAIL slip-on fittings and new or used pipe in standard I.P.S. pipe sizes. A hex key and hacksaw are all he needs, because NU-RAIL fittings *slip on* the pipe, and the unique offset design reduces cutting to a minimum. Made of high-tensile aluminum alloy . . . no painting or plating . . . use for temporary railings, too. 100% pipe salvage.

THE HOLLAENDER MANUFACTURING CO.
3841 Spring Grove Ave., Cincinnati 23, Ohio

For more details circle NED-979 K8 on enclosed inquiry slip



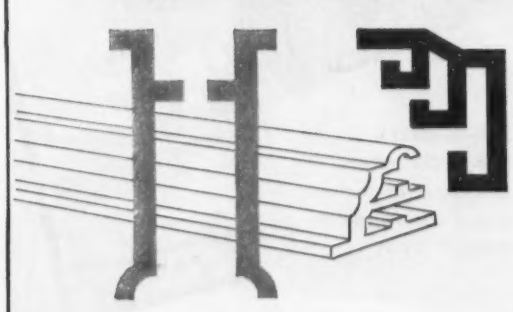
That describes this 1465-lb. palletized load of differential shaft housings, securely strapped lengthwise and crosswise with USS GERRARD* Round Steel Strapping.

If *you* have a tying job to be done, USS* GERRARD Steel Strapping can do it *better* and at *less cost*. Send today for a free copy of USS Gerrard's 36-page Blue Book of Packaging. Gerrard Steel Strapping, 4717 South Richmond Street, Chicago 32, Illinois.

Gerrard Steel Strapping Dept.
U. S. Steel Supply Division of United States Steel
USS
*TRADEMARK

For more details circle NED-980 K8 on enclosed inquiry slip

SEARCHING FOR A SOURCE FOR ALUMINUM SHAPES



JUST WRITE

WOLVERINE TUBE
DIVISION OF
CALUMET & HECLA, INC.
17266 Southfield Road
Allen Park, Michigan
Manufacturers of Quality-Controlled Tubing and Extruded Aluminum Shapes

For more details circle NED-981 K8 on enclosed inquiry slip

Binks spray outfits cut maintenance painting costs

Inside or out...paint more area in less time. Spray gun extensions reduce need for extensive scaffolding. Binks spray painting outfits supplied for use with in-plant compressed air or with gasoline or electric motor driven air compressors.

MD BULLETIN describes 13 outfits.

Ask your Binks industrial distributor for a copy or send direct to the address below.

7087

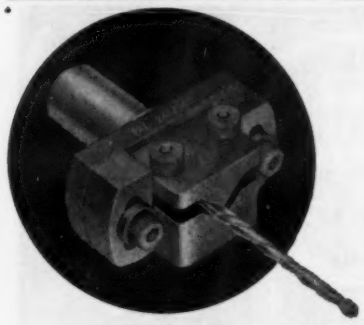
Ask about our spray painting school Open to all...NO TUITION...covers all phases

Binks EVERYTHING FOR SPRAY PAINTING

Binks Manufacturing Co.
3122-34 West Carroll Avenue
Chicago 12, Illinois

REPRESENTATIVES IN PRINCIPAL U. S. & CANADIAN CITIES • SEE YOUR CLASSIFIED DIRECTORY

▲ For more details circle NED-982 K8 on enclosed inquiry slip ▲



in half the time

Brookfield Tool Holders

make tool set-ups easy!

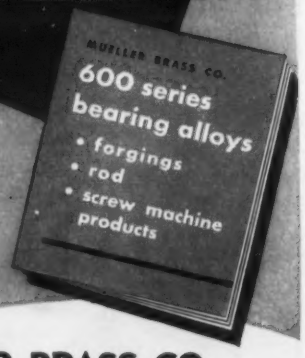
Now, without bushings or collets, on the first try you can set up drills, counterbores, reamers or cutters for almost any machining operation. Precision ground V-jaw vises, Brookfield Tool Holders make even toughest set-ups a cinch. With one wrench, insert the tool, tighten the jaw, then float the tool into dead center position and tighten. It's as easy as that!

FREE! *Descriptive illustrated brochure, plus price and specification lists.*

BROOKFIELD, INCORPORATED
STOUGHTON 114, MASSACHUSETTS

▲ For more details circle NED-983 K8 on enclosed inquiry slip ▲

"600" SERIES bearing alloys can do the *tough* jobs better...



only MUELLER BRASS CO. offers this superior series ...get our complete manual today

MUELLER BRASS CO.
PORT HURON 37, MICHIGAN

please send me a copy of your ENGINEERING MANUAL FM-3000

NAME _____
COMPANY _____
ADDRESS _____

▲ For more details circle NED-984 K8 on enclosed inquiry slip ▲

New Literature & Catalogs

Processing Equipment

Blaw-Knox Co., Buflovak Equipment Div.—Variety of processing machines and vessels produced for the chemical, food product, and by-product recovery is subject of illustrated Bulletin 385. Tables of specifications and design data are given for evaporators, concentrators, dryers, flakers, cooling drums, autoclaves, mixers, and other equipment.

▲ For more details circle NED-985 K8 on enclosed inquiry slip ▲

Air Moving Equipment

Wm. W. Meyer & Sons, Inc.—Letter-size file folder contains engineering data sheets and stock lists of various types of rebuilt and new blowers, fans, exhausters, and other air moving equipment. Steel plate exhausters, and other air moving equipment. Steel plate exhausters, rotary positive blowers, and pneumatic conveyors are covered. Specifications are included.

▲ For more details circle NED-986 K8 on enclosed inquiry slip ▲

Insulation Adhesives

Insul-Coustic Corp.—Facts relative to application, properties, temperature ranges, and coverage per gallon of a wire range of insulation adhesives are included in Bulletin I-C 58. Described are white and colored coatings and adhesive-coatings, asphalt and aluminum-asphalt weatherproofing, high-temperature adhesives, nonshrinking vapor sealers, high pressure joint sealers, and fire-retardant vapor barriers.

▲ For more details circle NED-987 K8 on enclosed inquiry slip ▲

Tool Steel

Uddeholm Co. of America—Stock List 13 of tool steels includes analyses and stock sizes of rounds, flats, squares, billets, and special shapes. A tool steel selector and a properties guide are included. Brand name chart covers 13 tool steel producers. Also included are a temperature conversion chart, and tables of engineering data.

▲ For more details circle NED-988 K8 on enclosed inquiry slip ▲

Better Drilling

Cincinnati Lathe & Tool Co.—"You're On the Road to Better Drilling" is title of 28-page, humorously illustrated booklet which shows how improved precision and economy can be obtained in drilling operations. The pocket-size booklet explains spiral point drill geometry and provides a section for jotting down drill point angles, speeds, feeds, coolant, and other data.

▲ For more details circle NED-989 K8 on enclosed inquiry slip ▲

Engineering Facilities

Berthelsen Engineering Works, Inc.—Design and engineering scope of company's staff and facilities is outlined in 16-page brochure. It also points up outstanding construction features of hydraulic hot presses and devotes space to installations and applications in aircraft, automotive, building, metalworking, plastic, furniture, and woodworking industries.

▲ For more details circle NED-990 K8 on enclosed inquiry slip ▲

Delicate Product Shipment

North American Van Lines, Inc.—Two illustrated brochures describe the know-how and equipment for shipment of equipment and delicate products. An 8-page bulletin "Use North American Padded Vans" covers company's display moving service, whereas the 6-page folder deals with the safe handling of high-value products.

▲ For more details circle NED-991 K8 on enclosed inquiry slip ▲

Production Facilities

Model Engineering & Mfg. Inc.—Memcor, this company's new symbol, is introduced in 8-page form ME-65810 along with information concerning the firm's Electronics, Precision Mechanical, Courter Products, and Tru-Ohm Resistor Products Divisions. Top administrative and sales executives are identified and plant facilities are illustrated, as well as Memcor components, assemblies, and typical products using Memcor assemblies.

▲ For more details circle NED-992 K8 on enclosed inquiry slip ▲

Fractional-HP Motors

Bodine Electric Co.—Wide choice of physical and electrical characteristics is afforded the industrial designer by Type N fractional horsepower motors. These units are available in three basic sizes, in standard ratings from 1/150 to 1/6 hp at 1725 rpm. Motor diameters range from 3⅜ to 5½ in. Illustrated Bulletin 1021-B describes construction of both ac and dc units.

▲ For more details circle NED-993 K8 on enclosed inquiry slip ▲

With heavy duty, rubber tired, ball bearing wheels and one piece fold-down handle, the Wells Model 49A is a metal cutting band saw that's REALLY MOBILE . . . and VERSATILE. Use the 49A as a horizontal cut-off machine (capacity 3½" x 6") or swing the head to vertical position . . . it's an upright band saw.

The optional wheel and handle unit, available for new machines and those already in service, is a tremendous time and labor saver. Ask your local Wells Distributor for details . . . or write for Bulletin 253-H.

Wells

The Pioneers of Horizontal
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 Harding Ave. Three Rivers, Mich.

▲ For more details circle NED-994 K8 on enclosed inquiry slip ▲

NEW!

CLEMENTS Cadillac® MODEL 55

HERE'S YOUR BEST VALUE IN A BIG CAPACITY ALL-PURPOSE CLEANER

New—and powerful! Versatile and rugged! Exclusive two-speed motor with high speed for the tough sump jobs . . . reduced speed for ordinary cleaning. Strong, easy-roll dolly turns on its own diameter. Casters and handle grips are oil resistant. Position retaining handle. Clements Cadillac high-quality throughout, yet priced with the lowest!

SAVE MONEY 3 WAYS

ORDER COMPLETE ...with either one or two portable two-speed blower-suction units, gasketed cover, 55 gallon painted drum, easy-roll dolly and choice of attachments.

ORDER WITHOUT DRUM Use your own 55 gallon drum. Order gasketed cover, one or two portable two-speed blower-suction units, easy-roll dolly plus choice of attachments.

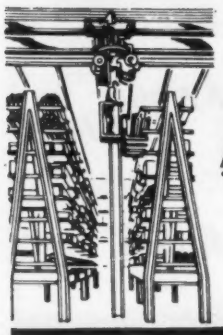
ORDER CONVERSION KIT Converts your Cadillac Blower-Suction Cleaner or Model 14 Vacuum Cleaner to a big capacity Model 55. Order only gasketed cover and easy-roll dolly.

ASK FOR NEW BULLETIN 2005

SINCE 1910

Industrial Products Division
CLEMENTS MFG. CO.
6627 S. Narragansett Ave., Chicago 38, Ill.

▲ For more details circle NED-995 K8 on enclosed inquiry slip ▲



use your Air rights . . .

INCREASE HANDLING EFFICIENCY, SPEED MATERIAL MOVEMENT, SAVE SPACE, TIME, MONEY WITH

TRAK-RAK®

A TRAK-RAK System saves valuable floor area by permitting vertical material storage and handling, yet provides faster, safer in-and-out of storage handling than on the floor operation. TRAK-RAK gives you better inventory and parts control, lowers handling costs, improves material delivery. Over 200 TRAK-RAK systems installed in companies like Alcoa, Carson Pirie Scott & Co., Chain Belt Co., Du Pont, Westinghouse, General Electric, etc.

Write for complete Gib Crane Catalog showing complete line—

CHICAGO TRAMRAIL CORPORATION
1310 S. Kostner Avenue • Chicago 23, Illinois

For more details circle NED-996 K8 on enclosed inquiry slip

Webster DIRECT READING
HYDRAULIC TYPE
FORCE GAUGES

Measures electrode pressure on spot welders and roll welders. Makes compressive tests on forming, dimpling and upsetting operations. Also useful for weighing. Insulated contact surface prevents damage if welder is accidently fired. Easy setups, no delicate mechanisms, 5 ranges: 0-1000, 6000, 10,000, 20,000, 40,000 lbs. 3½" diameter gauge with accuracy to 1%. Reads directly in pounds—no conversion scales. Write for details.

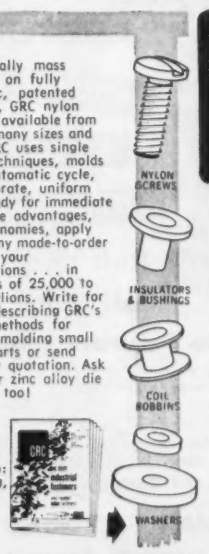
Webster INSTRUMENT, INC.
Dept. N, 11856 Mississippi Ave., Los Angeles 25, California

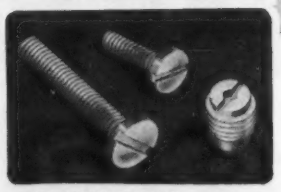
For more details circle NED-997 K8 on enclosed inquiry slip

NEW NYLON PARTS from GRC

Economically mass produced on fully automatic, patented machines, GRC nylon parts are available from stock in many sizes and types. GRC uses single cavity techniques, molds in one automatic cycle, gets accurate, uniform parts, ready for immediate use. These advantages, these economies, apply too, on tiny made-to-order parts to your specifications . . . in quantities of 25,000 to many millions. Write for bulletin describing GRC's unique methods for injection molding small plastic parts or send prints for quotation. Ask about our zinc alloy die castings, too!

NO SIZE TOO SMALL, maximum: 1¼" long, —.03 oz.





NYLON SCREWS
FOR LESS THAN YOU THINK!

That's right! GRC's unique automatic single cavity molding techniques not only give you exceptional uniformity and accuracy but also real economy. For example:

#8-32 x ½" machine screws (100,000 lots) $10.80 M

Take advantage of nylon's outstanding properties . . . and take advantage of the outstanding savings possible with GRC molded nylon fasteners—set screws, screw insulators, washers, etc.—available from stock in a wide range of types, sizes and lengths.

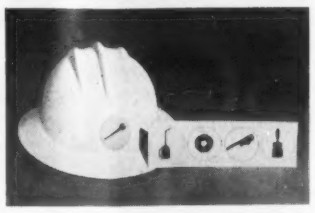
Write, wire, phone NOW for GRC's *new catalog* of Die Cast and molded Fasteners. M.

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y. • NEw Rochelle 3-8600

For more details circle NED-998 K8 on enclosed inquiry slip

New Processes & Materials

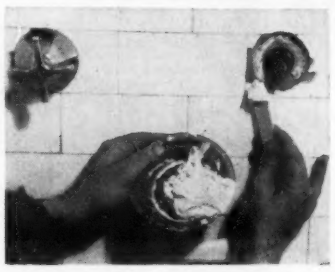
SAFETY HAT EMBLEMS identify workers' trades



Self - adhesive B - 500 vinyl - cloth emblems for hard type safety hats provide unmistakable trade identification of workers. Thirty different standard emblems are available for the electrician, roofer, welder, mason, carpenter, plumber, driver, and other construction trades. Additional emblems identify workmen as members of safety committees and safety award winners. Emblems can be applied without moistening and are removed quickly when hats are changed. They will adhere to metal, plastic, painted or unpainted hats. Clear plastic overcoating resists abrasion, grease, and dirt. Stock sizes of 2 and 3 in. are mounted on Blue Streak dispenser cards. Made by **W. H. Brady Co.**, Dept. NED, 727 W. Glendale Ave., Milwaukee 9, Wis.

For more details circle NED-999 K8 on enclosed inquiry slip

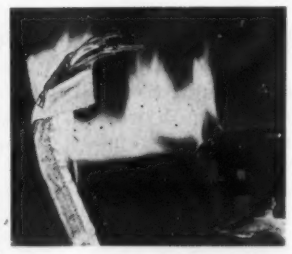
PLASTIC FILLER-PATCH repairs breaks, holes, chips, dents



Ability to mend, join, or seal metal, concrete, plastic, wood, plaster, porcelain, tile, Formica, and stone is reported for Platch, a paste-like plastic filler. It can be used to repair breaks, holes, chips, and dents in a wide variety of objects. A few drops of hardener are blended with the filler, supplied in a tube. Mixture is worked into the damaged area and dries in 30 min. It is white and nontoxic, dries hard, and can be filed, drilled, sanded, and painted. Material contains U. S. Rubber's reinforced Vibrin and will not shink, crack, craze, dent, or peel. Available are 89 cent and $1.69 sizes. Made by **Humphrey-Wilkinson, Inc.**, 301 Devine St., North Haven, Conn.

For more details circle NED-1000 K8 on enclosed inquiry slip

CABLE JACKET easily applied, resists 2000° F



Aluminized reflective asbestos fiber used in manuture of Thermazip cable jacket enables it to withstand 2000° F continuous operating temperatures and 3000° F for brief periods. The easily applied jacket is closed by a plastic or metal zipper track stitched to the fiber with high temperature Teflon thread. An external flap protects the track. It can be used over cables and components exposed to missile blasts, engine or rocket heat, flame, or sparks. Thermazip is available in sizes from ⅜ in. ID up in increments of ⅛ in. and in 25, 50, and 300-ft lengths. Standard color is silver. Made by **Zippertubing Co.**, 752 S. San Pedro St., Los Angeles 14, Calif.

For more details circle NED-1001 K8 on enclosed inquiry slip

EPOXY PLASTIC for elevated temperature use

High heat resistance and ability to withstand heat distortion in electrical insulation uses are attributed to Hysol 6000HH-867, an epoxy plastic in sheet, rod, and tube form. It can be used for coil forms, resistor bobbins, resistor shells, and other intricate parts to be used at elevated temperatures. Readily machined, it is offered in black filled form only. Heat distortion point exceeds 150° C. It also passes flame resistance and moisture absorption tests. Made by **Houghton Laboratories Inc.**, Dept. NED, 333 Bush St., Olean, N. Y.

For more details circle NED-1002 K8 on enclosed inquiry slip

LIGHT UP WITH Cordomatic®

DROP LIGHT REELS

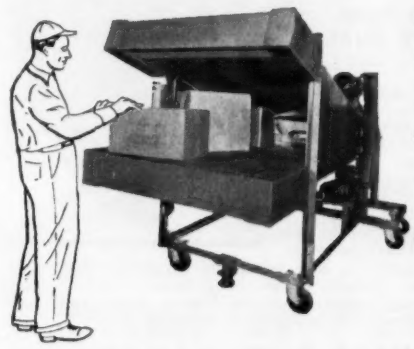
20', 30' & 40' cord lengths. Grounding Type Also Available

Write for illustrated full-line catalog!

Cordomatic® Dept. JL, 17th and Indiana Ave. Philadelphia 32, Pennsylvania

For more details circle NED-1003 K8 on enclosed inquiry slip

The "MAW" that Collapses and Shreds anything that belongs in a paper bale!



Specifications:
Floor space required: 68"x97"
Net weight 4,700 lbs.
Shipping weight 5,000 lbs.
Knives powered by heavy-duty, 15 h.p., 3 phase, 60 cycle motor—220 or 440 volts.
Individual motors for crusher belts.
Reversing switch on belts and knives.
For continuous operation as fast as one man can feed.

Costly labor to prepare boxes for shredding is unnecessary with the Silver "40 A". Cartons and paper boxes are both crushed and shredded for simplified baling.

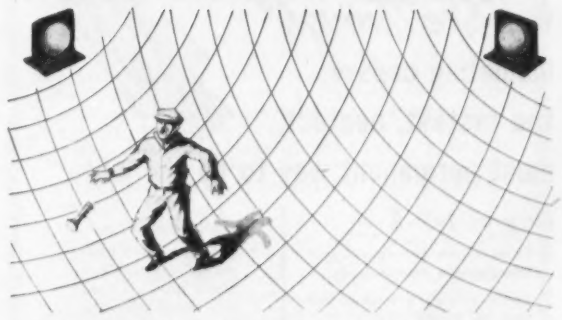
Shredded material can be fed directly into baler or carried away by pneumatic or conveyor system.

Send for complete information about the Silver "40 A" (one of 11 models) today.

Industrial Shredder and Cutter Company
107 MILL ST. • SALEM, OHIO, U. S. A.

For more details circle NED-1004 K8 on enclosed inquiry slip

TRAP THIEVES WITH SILENT SOUND!



Get complete wall-to-wall, floor-to-ceiling burglar protection with the Kidde Ultrasonic Burglar Alarm System. Can't be bypassed, can't be sabotaged, completely tamper-proof, even traps lock-ins. Uses high-frequency sound waves which can't be heard. Qualifies for Underwriters' Labs Number Two Certification! Send coupon or write today for booklet and complete information!

WALTER KIDDE & COMPANY, INC.
Ultrasonic Division
1024-A MAIN ST., BELLEVILLE 9, N. J.
Please send me your Ultrasonic Burglar Alarm System Booklet.
NAME
ADDRESS
CITY STATE

For more details circle NED-1005 K8 on enclosed inquiry slip

solve your
VALVE
problems here!

United valves are precision-engineered for all purposes and used on original equipment for many industries. Wide variety of standard sizes and types available immediately, or designed for your need. Valve problems? United can help you!

Write today for prompt information and descriptive catalog—

UNITED

UNITED BRASS WORKS, INC.
Randleman, North Carolina
VALVE MANUFACTURERS FOR HALF A CENTURY
▲ For more details circle NED-1006 K8 on enclosed inquiry slip ▲

DON'T GET LOST in the "PROFIT SQUEEZE"
new slants

★ SAVE YOUR TIME,
★ CUT YOUR COSTS,
★ IMPROVE YOUR PRODUCT QUALITY

Break the profit squeeze with Brightboy and improve your product at a lower cost. Abrasive and rubber combine to BURR, CLEAN, FINISH, POLISH, *in a single-step operation!*

Brightboy's STOCK abrasives are JOB-MATCHED to your work, perform regular as well as special finishing. Aluminum Oxide and Silicon Carbide grains, extra fine to extra coarse; soft, firm and tough rubber binders. Wheels, sticks, rods and blocks, for machine and manual operation.

ASK YOUR DEALER for Brightboy for *your* needs, and for the Brightboy Catalog. Write for "Notes From The Brightboy Service Engineer" describing cost-saving Brightboy applications.

WELDON ROBERTS **Brightboy** RUBBER CUSHIONED ABRASIVES

WRITE FOR FREE SAMPLE BRIGHTBOY HAND PIECE for quick-job cleaning

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th St., Newark 7, N. J.
America's Pioneer Manufacturer Of Rubber-Bonded Abrasives

▲ For more details circle NED-1007 K8 on enclosed inquiry slip ▲

New T&B PT66-M Sta-Kon® wire joints

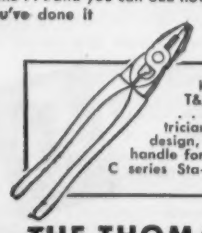
Pat. Pending

with *"See Through"* insulating caps— the fastest, neatest, most permanent way to do the job!

Easy as 1-2-3

1 Twist wires and insert into heavy-gauge bronze body
2 Apply staking pressure, then trim off excess wire.
3 Screw on transparent plastic insulating cap — the job is done . . . and you can SEE how you've done it

- small compact size
- brightly colored transparent cap can't vibrate loose . . . permits visual inspection of joint
- wide range — solid or stranded combinations up to 3-#12 AWG Max.



Heres the tool to use . . . T&B's new Sta-Kon *plus* Pliers . . . combines standard electrician's "side cutters" with a new design, wide-range installing die in handle for PT66-M and other A, B, and C series Sta-Kon connectors.

T 53

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street • Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P. Q., Canada

▲ For more details circle NED-1008 K8 on enclosed inquiry slip ▲

New Literature & Catalogs

Floor Care

Masury-Young Co.—32-page booklet, "What Every Executive Should Know About This Vital One Thousandth of an Inch," presents helpful information on various types of floors, along with recommendations on the proper treatment required for maintaining each type. Asphalt, rubber, vinyl, cork tile, wood, concrete, terrazzo, and marble types are covered.

▲ For more details circle NED-1009 K8 on enclosed inquiry slip ▲

Reciprocating Pumps

Jaeco Pump Co.—LC, HC, and HCP reciprocating pumps for chemical proportioning and power service are described in Catalog 758. These units are made in simplex and duplex types with capacities ranging from 2 cc per hour to 675 gph. Metering accuracy is ±½ per cent. Pressures range to 4575 psi. Catalog tabulates 42 standard sizes with pressure and horsepower data.

▲ For more details circle NED-1010 K8 on enclosed inquiry slip ▲

Two Wheel & Platform Trucks

Fairbanks Co.—Construction features, applications and basic specs for five types of Commander steel-framed platform trucks and 15 types of Series 9000 steel-framed two wheel hand trucks are provided in 6-page Bulletin T-1-A. Also described are Lift-Jack platform trucks, all-wood platform trucks, dollies, and all-steel two-wheel hand trucks.

▲ For more details circle NED-1011 K8 on enclosed inquiry slip ▲

Polyvinyl Chloride Pipe

Carlon Products Corp.—Polyvinyl chloride pipe is applicable in oil, paper, chemical, metalworking, and food industries for handling process fluids and wastes. Sixteen page Manual PVC-100 details information for selection and application of line of PVC pipe; tubing; and Schedule 40, 80, and 120 fittings. Both normal and high-impact types are covered.

▲ For more details circle NED-1012 K8 on enclosed inquiry slip ▲

Aluminum Rigid Conduit

Aluminum Co. of America—According to 12-page Form 17-10283, aluminum rigid conduit can be purchased and installed at a cost comparable to, or less than, that of conventional conduit. Booklet outlines mechanical and electrical advantages of aluminum rigid conduit, among which are resistance to corrosion, nonmagnetic properties, light weight, nontoxicity, nonsparking features, and freedom from staining.

▲ For more details circle NED-1013 K8 on enclosed inquiry slip ▲

Steel Strapping Tools & Accessories

Stanley Works, Stanley Steel Strapping Div.—Pocket-size Catalog SSS-209 presents product information on standard and heavy-duty Stanley steel strapping, hand and strapping power tools, accessories, Colorgraph strapping, and lithographed seals. "Strapplications" shown are reinforcement, closure, baling, bundling, palletizing, tying, and heavy duty car loading.

▲ For more details circle NED-1014 K8 on enclosed inquiry slip ▲

Hoists, Cranes & Crane Components

Consolidated Crane & Engineering Corp.—64-page Catalog 58 A, a manual compiled for crane manufacturers, dealers, and contractors, illustrates and describes end trucks, Gard-Elex enclosed conductors, Load Tamer hoists, crane drives and fluid drive motors, trolleys, runway rails, hanger fittings, and other components for building top riding and underslung cranes from 1 to 15-ton capacity.

▲ For more details circle NED-1015 K8 on enclosed inquiry slip ▲

Special Air Moving Units

American-Standard, American Blower Div.—More than 50 proven special packaged air moving units described in 16-page Bulletin 5412 include centrifugal blowers, Vaneaxial fans, Tubeaxial fans, propeller fans, pressure blowers, and fluid coolers. Configurations shown are duplex and cabinet blowers, ducted fans, double-inlet fans, and twin fan units. Wheel diameters range from 4 to 16 in.

▲ For more details circle NED-1016 K8 on enclosed inquiry slip ▲

Sealed Relays

General Electric Co.—24-page Bulletin GEA-6628 affords up-to-date information on hermetically sealed relays for military and general purpose industrial applications. Photos, diagrams, coil data, and specs for micro-miniature, subminiature, and high-speed relays are included. Micro-miniature units weigh from 0.4 to 0.7 oz in popular crystal-can size.

▲ For more details circle NED-1017 K8 on enclosed inquiry slip ▲

NEW
STRUCTURAL MATERIAL
ElastaCAST®

* Licensed under U. S. Pat. 2,764,565

Tougher than Most Metals!
(Available only in cast parts & products)

Precision cast to specified shapes, this newest structural material offers unusual mechanical properties and service life making it a much desired choice over metals, nylon and other non-metallics for many applications. ElastaCAST*, a urethane rubber, utilizes inexpensive fabricating techniques to produce component parts at new low unit costs.

Property advantages such as high tensile strength 4,000 psi. to 7,300 psi., wide range of hardness — 62 to 92 Shore A and excellent abrasion and tear resistance make it a must in your requirements for progressive design and greater functional efficiency.

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Natural and Synthetic Rubber parts precision-molded to your specifications.

ACUSHNET PROCESS COMPANY
NEW BEDFORD MASSACHUSETTS

Address all communications to 782 Belleville Ave., New Bedford, Mass.

▲ For more details circle NED-1018 K8 on enclosed inquiry slip ▲

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BEFORE YOU BUY BE SURE TO CHECK OUR NEW LOW PRICES . . . Send part sample and requirements of job for firm price

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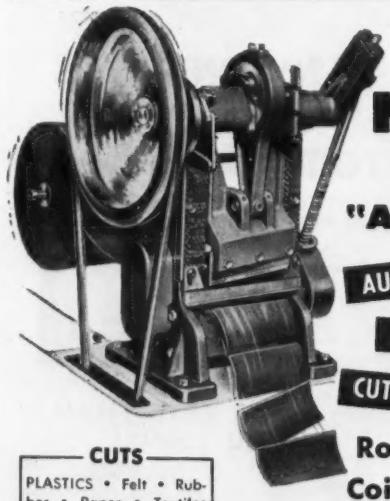
Above prices include 115 volt totally enclosed electric motor. 220/440 volt motor $10.00 additional.
**Tracks extra. Send sample parts for quotation.*

Feedmatic-Detroit, Inc.
26899 W. 7 MILE RD., DETROIT 40, MICHIGAN
PHONE: KE 7-0690

▲ For more details circle NED-1019 K8 on enclosed inquiry slip ▲



NEW JACO "AUTOGIL"
AUTOMATICALLY MEASURES CUTS and COUNTS
Roll and Coil Stock to Accurate Lengths

CUTS
PLASTICS • Felt • Rubber • Paper • Textiles Wire • Thin Metals

AUTOGIL . . . a new, heavy-duty automatic guillotine . . . eliminates costly hand cutting . . . increases production. Available in two sizes . . . two types . . . up to 5" or 15" wide . . . infinite feed lengths . . . each type maximum 8" or 96" long . . . cuts material up to 3/16" thick . . . production speeds . . . from 120 cuts per minute . . . send for details to Dept. 25A.

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EST. 1882 41-J Salisbury St., Worcester 5, Mass.
Representatives in Irvington, N. J.; Chicago, Ill.; Cleveland 1, Ohio; Greenville, S. C.; Toronto, Ont.

▲ For more details circle NED-1020 K8 on enclosed inquiry slip ▲

Borg 1100 Series Micropots offer

QUALITY...

reduce component costs!

Mass produce your precision products with price advantages in your competitive markets. Simplicity of design and interchangeable parts give Borg 1100 Series Micropots permanent accuracy. Gangable. Lug type terminals or flexible leads. Many other optional features. Write for name of your nearest Borg "Tech-Rep" today.

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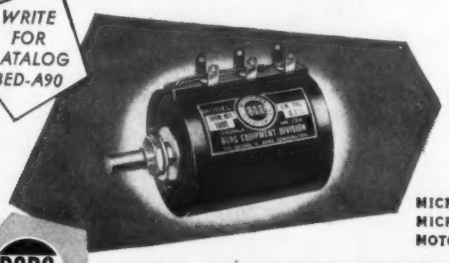

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MICRODIALS
MOTORS

BORG

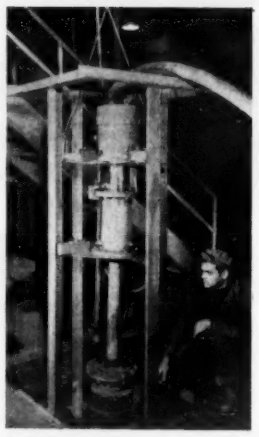
BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

For more details circle NED-1021 K8 on enclosed inquiry slip

At The New Jersey Zinc Co., Jefferson City, Tenn.

NAGLE VERTICAL SHAFT PUMP
IS RIGGED FOR EASY INSPECTION

A Nagle 2" type "CWO-C" sump pump with abrasion resistant water end is doing a good job at The New Jersey Zinc Co.'s Jefferson City, Tenn. Mill. Its function is to return flotation spills and filter vacuum pump water to the flotation circuit. Pump is mounted within a frame with guides for easy raising and lowering. Pump is shown raised. In service a year, no maintenance has been required. This is not unusual for a Nagle Pump — built for abusive applications exclusively. Send for Nagle Pump Selector.



NAGLE PUMPS

NAGLE PUMPS, INC.
1265 CENTER AVE., CHICAGO HEIGHTS, ILL.

PUMPS FOR ABRASIVE AND CORROSIVE APPLICATIONS

For more details circle NED-1022 K8 on enclosed inquiry slip

David Round

Jib Cranes
SERIES 300
PILLAR TYPE - SELF SUPPORTING

Fine Quality Construction—Completely Reliable Service

- heavy duty self aligning spherical bearings
- sealed dust proof steel housings
- collector rings
- self-aligning, full contact steel rollers
- deflection adjusting screws
- roller bearings
- steel wear ring

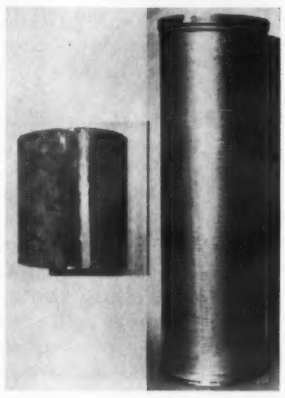
HEADS AND WEAR RINGS
Available Separately
Write for BULLETIN 225-JC

DAVID ROUND & SON, INC., CLEVELAND 22, OHIO

For more details circle NED-1023 K8 on enclosed inquiry slip

New Processes & Materials

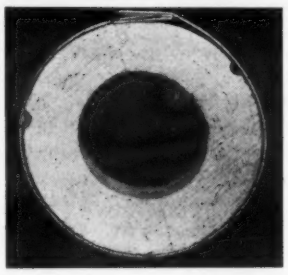
MISSILE & ROCKET STEEL
tensile strength is 280,000 psi



Possessing the desired strength and toughness levels for missile and rocket applications, air-hardening Airsteel X-200 alloy is cut or fabricated easily in the annealed or "soft" condition. It can also be welded readily, and welded joints have strengths equal to that of material. When cooled in air and tempered, it develops tensile strength levels in the 280,000 psi range. This alloy steel is also available for other than missile use in billets, blooms, bars, plates, and sheets. Made by **United States Steel Corp.**, Room 2609, 525 William Penn Place, Pittsburgh 30, Pa.

For more details circle NED-1024 K8 on enclosed inquiry slip

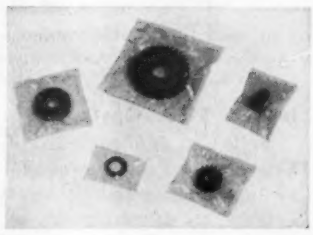
PIPE INSULATION
has aluminum outer jacket



Thermobestos calcium silicate insulation and an aluminum outer jacket are combined to form Metal-On pipe insulation. Installed in a single operation, it withstands temperatures up to 1200° F. The 0.016-in. thick aluminum has a vapor barrier between it and the permanently attached insulation. Joints are sealed with metal "snap straps." Sections 36 in. long are offered in up to 24-in. pipe sizes with up to 3-in. thicknesses. Straight cuts are made with a standard band saw. Cut-outs around pipe supports and hangers are made with a portable saber saw or hacksaw. Made by **Johns-Manville**, Box 60, New York 16, N. Y.

For more details circle NED-1025 K8 on enclosed inquiry slip

TRANSPARENT PACKAGING FILM
heat sealable type inhibits rust



Chemical rust inhibition, transparency, and heat sealability are combined in Nox-Rust Clear - Pak packaging film. Film is DuPont Mylar to which has been applied a heat sealing composition containing volatile corrosion inhibitors. It protects metal parts from rust and dirt, yet allows inspection and identification of the item without unwrapping. The high-strength polyester film resists moisture, oils, and greases and is available in rolls, or in made-to-order pouches. It can be sealed on automatic packaging machines or by hand. Offered by **Daubert Chemical Co.**, Dept. NED, 333 N. Michigan Ave., Chicago 1, Ill.

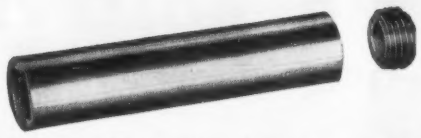
For more details circle NED-1026 K8 on enclosed inquiry slip

STEEL MARKING PAINT
penetrates subsequent paint coats

An identifying code placed on steel and iron sections with Penapaint permanent marking paint will remain visible even after fabricating and assembly operations. Applied with brush, spray, or stencil to the bare metal, it instantly penetrates any subsequent paint coatings. It will not rub or wash off and dries rapidly. When the code is no longer needed, further penetrating action is quickly stopped with Penapaint Mask. This second coat provides a good base for any type of finish paint coating. Made by **Phillips Products, Inc.**, Dept. 111, 1435 E. 17th St., Cleveland 14, Ohio.

For more details circle NED-1027 K8 on enclosed inquiry slip

How SQUARE HOLED SLEEVES SPEED UP TOOL-MAKING!



One of the most difficult problems in toolmaking can be solved easily and quickly with Sturdy Square Holed Sleeves. The perfection of broached square holes can be had in boring bars, milling cutters and many other applications at a small fraction of the cost of imperfect hand-made square holes. The Sturdy Square Holed Sleeve consists of a round sleeve with a perfectly square hole broached through the center. This hole is tapped at one end to receive a back-up screw which is furnished with the Sleeve. The Sleeve can be sweated or pressed into a drilled and reamed hole to make a perfectly square accurate hole in a very few minutes.

The Sturdy Square Holed Sleeve will save you many hours and many dollars in the making of boring bars, tool holders and other tools requiring square holes.

SLEEVES MADE IN FOLLOWING SIZES:
3/16, 1/4, 5/16, 3/8, 7/16, 1/2, 5/8, 3/4, 1"

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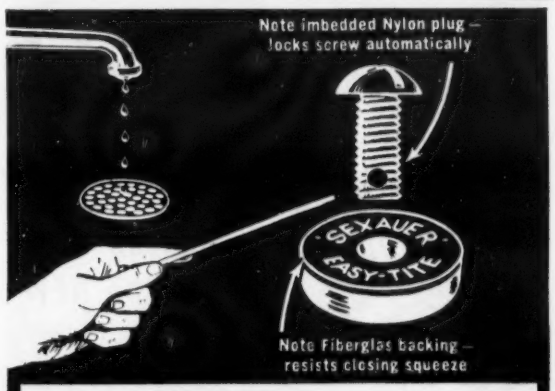
STURDY BROACHING SERVICE, INC.
23514 TELEGRAPH RD., DETROIT 41, MICH.

For more details circle NED-1028 K8 on enclosed inquiry slip



NEW WAY TO

Prevent Faucet Leaks!

★ 9 out of 10 washers are fastened with screws that are TOO LONG or SHORT. The screws quickly loosen; the loosened washers are destroyed thru grind and squeeze of opening and closing faucets.

34 years of research uncovers new solution

★ Now, NEW (Patented) 'Sexauer' SELF-LOCK Monel screws, with an imbedded expanding NYLON PLUG, lock at the required depth AUTOMATICALLY, hold washers FIRMLY! Made of rustproof, non-corroding Monel, heads don't twist off, screw slots don't distort. They are easily removed when necessary, can be re-used repeatedly.

★ Used with NEW 'Sexauer' EASY-TITE faucet washers, they make a combination that outlasts past faucet repairs "6-to-1"! EASY-TITES are made of super-tough, pliable du Pont compound (neither rubber nor fibre) and reinforced, like a tire, with a vulcanized layer of Fiberglas. They resist distortion and splitting from shut-off grind and squeeze.

Hidden costs of faucet leaks!

Faucet leaks are costly! As authenticated by Hackensack, N. J. Water Co. and American Gas Association, stopping just ONE PIN-HOLE SIZE (1/32") LEAK can reduce water waste 8,000 gal. quarterly. If a HOT WATER FAUCET LEAK, water and fuel savings JUMP to over $7.58 QUARTERLY—plus additional savings on MATERIALS, LABOR and costly FIXTURE REPLACEMENTS!

NEW SELF-LOCK screws and EASY-TITE faucet washers are just TWO of the "SEXAUER" line of over 3000 TRIPLE-WEAR plumbing repair parts and Pat'd. precision tools.

A "SEXAUER" Technician in your vicinity will make our NEW 126 page Catalog "H" available. He will gladly consult with you regarding a SURVEY of your plumbing fixtures to determine correct repair parts required and establish reasonable stock levels that avoid both overstocking and shortages—thus providing for efficient stock arrangement and control—all without obligation. WRITE TODAY!

J. A. Sexauer Mfg. Co., Inc., Dept. AU-108
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your NEW, 126 page catalog "H."*

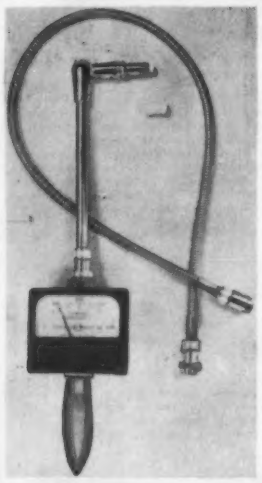
My Name_____ Title_____
Company or Institution_____
City_____ Zone_____ State_____

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-1029 K8 on enclosed inquiry slip

PYRO-SERV

SURFACE PYROMETER



Takes temperatures at any angle or deflection.

★

Quick disconnect interchangeable thermocouples.

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Gives precision measurements of surface and subsurface temperatures.

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MODEL 1331 $89.50
Less Cable

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PYROMETER SERVICE CO., INC.

348 RIVER ROAD, NORTH ARLINGTON, NEW JERSEY

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BROKEN GLASS?

IN SKYLIGHTS AND STEEL SASH

NOW! replace in half the time with the NEW

½" ELECTRIC HAMMER

MODEL H-812 A

THIS new hammer removes steel sash putty in *seconds*. No more tedious hand chipping. So lightweight (only 4 lbs.) . . . so easy to handle . . . cuts way down on operator fatigue. Increases worker's efficiency . . . speeds up the job by more than 50% . . . lowers maintenance costs.

Instantly adjustable blow control guarantees proper impact without danger of cracking adjacent windows. Hammer action stops when pressure is released . . . assuring long tool life. It's also ideal for tuck pointing masonry . . . and with Rawl drills for mounting pipe straps, installing duct work, anchoring switch boxes and many other applications. See your MILWAUKEE Distributor or write:

Look under "Tools — Electric"

$98.50 Complete in steel carrying case with assorted drills, chucks, chisels and accessories.

Find Us Fast in The Yellow Pages

Milwaukee Electric Tool Corporation
5320 West State Street • Milwaukee 8, Wisconsin

A8-9627

For more details circle NED-1031 K8 on enclosed inquiry slip

New Literature & Catalogs

Electric Heating Devices

General Electric Co.—Answers to hundreds of heating problems are supplied in 52-page Booklet GEC-10051 on heaters and heating devices. Data cover pipe heaters, thermostatically controlled immersion heaters, 1-in. diameter water immersion heaters, heater replacement elements, and new ratings and configurations of tubular heaters. Various heating processes are described in 10-page power requirements section, and typical application problems are solved.

For more details circle NED-1032 K8 on enclosed inquiry slip

Conveying Bulk Materials

Ajax Flexible Coupling Co.—"A Guide to Proper Selection of Vibrating Conveyors for Bulk Materials" is a 16-page manual. It shows the materials handling operations that can be performed simultaneously while conveying, and includes flow charts, pictures of various applications, capacities, dimensions, and other data.

For more details circle NED-1033 K8 on enclosed inquiry slip

Floor Grating & Stair Treads

Reliance Steel Products Co.—Rectangular grating with various wearing surfaces, Relgrit nonskid grating with embedded abrasive, U-type grating, radial grating, and numerous styles of stair treads are described in 16-page Catalog RSL-5. Data include panel sizes, weights, safe loads, surface treatments, and fastening methods.

For more details circle NED-1034 K8 on enclosed inquiry slip

Wiring Devices & Electrical Specialties

Eagle Electric Mfg. Co.—Over 1500 electrical wiring devices, lamps, and specialty products are catalogued in 76-page illustrated purchasing guide. New products shown for the first time are bottom turn sockets, rotary canopy switches, T-slot plug base, extension cords, heavy duty switches, and parallel ground adapters. They are all packaged for easy storage and use. All products are grouped in categories, cross-indexed for easy finding, and fully described.

For more details circle NED-1035 K8 on enclosed inquiry slip

Eccentric-Geared Presses

Niagara Machine & Tool Works—Complete design, operating, and performance information on the modernized Series SE straight-side single-action eccentric-geared presses is presented in 44-page Bulletin 66A. Capacities range from 100 to 1250 tons in these machines for heavy drawing, punching, and blanking work. Presses are available in 130 models in one, two, and four point suspension types.

For more details circle NED-1036 K8 on enclosed inquiry slip

Iron & Steel Castings

Belle City Malleable Iron Co. & Racine Steel Castings Co.—Concise data on available types of iron and steel castings produced by these companies to users' specifications are presented in Bulletin 17. Discussed are the factors influencing design and cost. Properties of steel; pearlitic, alloy, and malleable iron; and electric furnace gray iron are tabulated.

For more details circle NED-1037 K8 on enclosed inquiry slip

Temperature Detectors

Leeds & Northrup Co.—Thermohm temperature detectors for checking temperatures up to 1000° F are described in 36-page Catalog EN-34. Applications throughout industry, as well as in laboratory and research work, are shown. Also covered are complete assemblies, parts, and accessories for recording and control.

For more details circle NED-1038 K8 on enclosed inquiry slip

Advantages of Leasing Equipment

United States Leasing Corp.—Extensive charts and statistical analyses of equipment leasing are contained in 20-page brochure. The advantages of equipment leasing, including several case histories, are presented.

For more details circle NED-1039 K8 on enclosed inquiry slip

Electronic Hardware

Amatom Electronic Hardware Co.—75-page Reference Manual No. 85 lists thousands of sizes of more than a hundred different electronic hardware items. Components include plugs and jacks, binding posts, contact strips, connectors, fuse bases, pilot light units, toggle switches, terminals, and chassis fasteners. Engineering section deals with physical properties of elements, properties of rubber, temperature conversion, decimal equivalents, thread and tap drill sizes, metric conversion, and conversion factors.

For more details circle NED-1040 K8 on enclosed inquiry slip

FOR AIR-DUST OR FUME CONTROL...

Get this FREE catalog

WRITE TODAY FOR CATALOG #70
SHOWING NEW INDUSTRIAL APPLICATIONS

FLEXAUST hose and PORTOVENT retractable ducts are made of strong durable neoprene coated nylon or cotton fabrics, wire reinforced for suction or pressure uses. Sizes 1¼" to 36" i.d.

INSTALLED IN MINUTES . . .
IN SERVICE FOR YEARS

THE FLEXAUST COMPANY

DEPT. NE-10 100 PARK AVE., NEW YORK 17, N. Y.

DISTRIBUTORS IN ALL PRINCIPAL CITIES

For more details circle NED-1041 K8 on enclosed inquiry slip

NEW automatic all-weather

roof ventilator

All desired features of more expensive units now in new economy-priced Aerovent Model 53 Power Roof Ventilators! Discharge dust, fumes, heat, moisture! Dampers open and close automatically. Rugged construction and finest workmanship assure dependable all-weather operation! Sizes 12" to 48", with capacities to 41,000 C.F.M. Available for flat, sloped or peaked roofs.

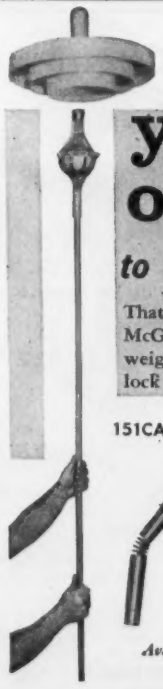
Other power and gravity units for air-supply or exhaust. write for free bulletin 600

Rated in accordance with Standard Test Code and U.S.D.C. Comm. Std. CS178-51.

Aerovent FAN CO. INC.

Ash and Blake Sts. Piqua, Ohio

For more details circle NED-1042 K8 on enclosed inquiry slip



keep your feet on the floor

to change bulbs in safety

That's exactly how you change bulbs with McGills Adaptable Lamp Changer, for a light weight insulated steel pole in 5' sections that lock securely in place enables you to change bulbs easily up to 20' above the floor. There are 9 different heads available to handle your present bulbs. Why not eliminate the danger of unsafe ladders and save maintenance time and money? You can with a McGill Lamp Changer.

151CA

200

Available from Electrical Wholesalers

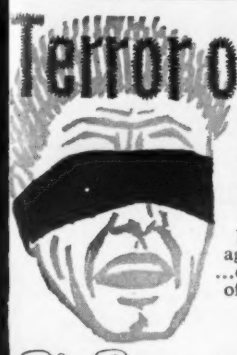
Write for McGILL catalog No. 84

engineered electrical products
McGILL
precision needle roller bearings

McGILL MFG. CO., INC., Electrical Div., 151 N. Campbell St., Valparaiso, Ind.

For more details circle NED-1043 K8 on enclosed inquiry slip

Terror of Darkness



Need Not Happen in Emergencies!

Protect your plant and your personnel against the hazards of sudden blackouts ...especially during those first 60 seconds of terror-striking pitch blackness. Install BIG BEAM Automatic Lights—NOW!

Big Beam Automatic EMERGENCY LIGHTS

With Built-In Automatic Chargers

Model 2ATW plugs into lighting outlet. Gives instant light automatically whenever regular current fails. Available with either 25, 30, 40, 80 or 100 ampere hour glass jar batteries.

Other BIG BEAM LAMPS

Model No. 287EX Explosion-Proof Hand Lamp

Model No. 108F Flashing Flare Beacon

Model No. 164 Sealed Beam Beacon Lamp

Write for Complete Information 7026

J-C-LITE MFG. CO. 1073 W. Hubbard St., Chicago 22, Illinois

CANADA: Bernard Marks & Co., 70 Claremont St., Toronto 3, Ontario

For more details circle NED-1044 K8 on enclosed inquiry slip

LUNKENHEIMER

Maintenance-Free

BRONZE COCKS

GAS • LIQUID • AIR • STEAM

Fig. 479 Fig. 278 Fig. 177

Stop leakage! Cut repairs and replacement costs! Bodies of Lunkenheimer T-1 Bronze (A.S.T.M. B62) with keys and plugs of high-strength H-1 Bronze, stamp these as the cocks you can install and forget.

2-3-4-Way • Gasoline Drain • Bibb Nose • Straightway Pet • Flat Head • Spring Key • 2-3-4-Port Steam Gauge • Packed Plug

Write for detailed literature

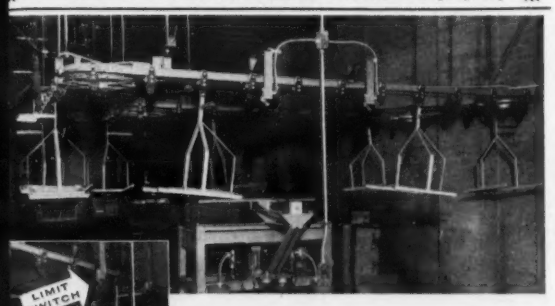
THE LUNKENHEIMER CO., CINCINNATI, OHIO

LUNKENHEIMER®

THE ONE *Great* NAME IN VALVES

L-557-16

For more details circle NED-1045 K8 on enclosed inquiry slip



AMERICAN "Cable-Way" Order-Filling Conveyor

Tote boxes are automatically discharged at any one of four stations

Order-filling at Burstein-Applebee Co., Kansas City, Mo., often requires parts from three departments. By setting a station selector on the carrier, tote boxes can be discharged automatically at any of the three departments, or can be cleared through to the shipping department where all tote boxes are automatically unloaded. Auto-discharge is performed by an air-operated roller conveyor section which lifts the tote box from the carrier, and an air-operated pusher which pushes the box onto a gravity roller conveyor. Limit switches, actuated by the station selectors on the carrier, operate the discharge mechanism.

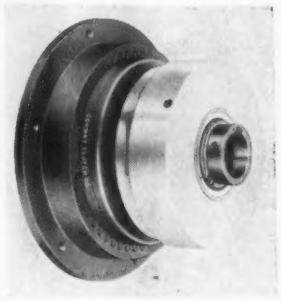
CONVEYOR DIVISION

THE AMERICAN MONORAIL CO.

Fourth & Franklin Streets • Tipp City 7, Ohio

For more details circle NED-1046 K8 on enclosed inquiry slip

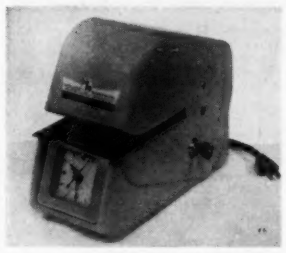
AIR-ACTUATED CLUTCH
can be mounted in middle of shaft



Design which makes air housing and piston non-rotating with respect to the rest of the unit allows this Stationaire air clutch to be mounted anywhere, even in the middle of a long shaft. In addition to features such as remote control, self-adjustment, quick response, large pressure area, and optional quick release, this unit also provides stationary air housing, interchangeability with mechanical clutch applications, one basic drive for six different applications, integral construction, and adaptability to coupling mounting. Made by **Conway Clutch Co.**, 2750 Colerain Ave., Cincinnati 25, Ohio.

For more details circle NED-1047 K8 on enclosed inquiry slip

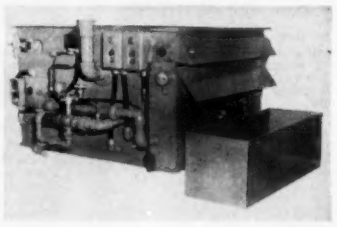
TIME & DATE STAMP
has instantaneous paper-trip



Improved line of date stamps include this Model TDC combination time and date stamp with an easily read clock. Also available are individual units for dating, numbering, and recording both date and number. Printing head, ribbon mechanism, and electric drive are combined with hammer method of printing to assure properly-aligned, clear impressions. Operation is by instantaneous paper-trip. Made by **Heller Roberts Mfg. Corp.**, Roberts Numbering Machine Div., Dept. A, 700 Jamaica Ave., Brooklyn 8, N. Y.

For more details circle NED-1048 K8 on enclosed inquiry slip

COOLANT FILTERS
continuous and intermittent types



Capable of handling water, water soluble, and oil coolants, this combination filter and drag-out conveyor unit is offered with a continuous or intermittent clean coolant automatic back-wash. Filter medium is a tubular screen which rotates at the same speed as the conveyor system. Degree of filtration is determined by screen size and timing adjustment of the back-wash. Single pump and motor powers the unit. Capacities range from 10 gpm and up. Made by **Lundholm Mfg. Co.**, Dept. A, 1121 Charles St., Rockford, Ill.

For more details circle NED-1049 K8 on enclosed inquiry slip

DEALER'S CHOICE

You make the heating rules when you have PANELBLOC, and old man winter must play the game YOUR way.

Gas-fired Panelbloc "Heats Like the Sun." No drafts — no cold start up blasts. Panelbloc heats objects and people — not the surrounding air. No moving parts means little or no maintenance needed. No electrical connections make the system independent of power failures.

Draw to an inside straight this winter — write for factual information today.

Thermobloc Division

PRAT-DANIEL CORPORATION

7-10 Meadow St. So. Norwalk, Conn.

In Canada—Canadian Wenson Combustion Equipment, Ltd. 164 Metcalfe Ave. Montreal

For more details circle NED-1050 K8 on enclosed inquiry slip

Users tell the Speed-Patch story best with orders for more . . . year after year. Why not take advantage of the experience of others and make ready-mixed Speed Patch your standard floor repair. Sets immediately. Heavy loads truck over each patch without waiting.

Write for Details

ROCK-TRED Corporation

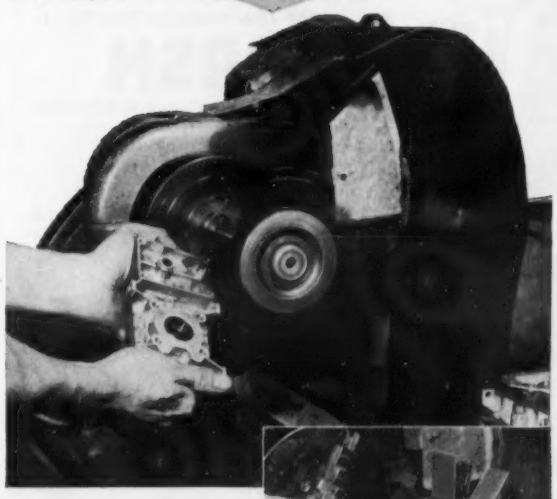
Manufacturers of a Complete Line of Building Maintenance Materials

7440-7450 North St. Louis Avenue • Skokie, Illinois

For more details circle NED-1051 K8 on enclosed inquiry slip

No other sander but SAND-O-FLEX can do this deburring job

Here Sand-O-Flex is solving one of the toughest sanding and deburring problems in the entire metalworking industry—removing burrs and slivers from intricate light metal castings without gouging the metal, chamfering straight edges or affecting close tolerances. These aluminum fuel slide valve housings for aircraft are thoroughly deburred in a matter of seconds at Wm. R. Whittaker Co., Los Angeles. Sand-O-Flex gets down-in and around the intricate shapes where no other sander can reach, yet still preserves the machined surfaces necessary for perfect alignment when assembled.



Above: Sand-O-Flex mounted on lathe thoroughly deburrs castings at Wm. R. Whittaker Co. Ltd.

Right: When rotated at 800 RPM, Sand-O-Flex removes excess metal without disturbing close tolerances.

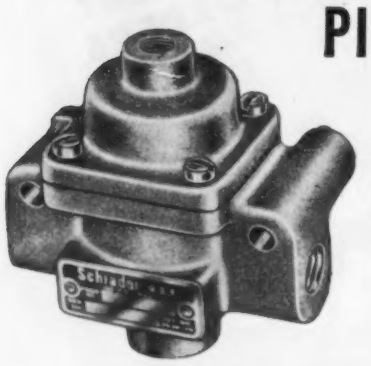
Sand-O-Flex is saving money and man-hours in thousands of deburring and finishing operations around the world. As the sander spins, flexible brushes gently mold the abrasive cloth over irregular surfaces, "wiping off" excess metal. The abrasive unwinds from a cartridge inside the metal case and is fed out as needed. Abrasives are furnished in many grits for a wide variety of applications. Sand-O-Flex is an attachment—it fastens to any rotating spindle (motor, lathe, drill press, electric hand drill, etc.)—no special equipment necessary. Four models, from portable to heavy duty production line uses. Write for catalog and prices. If you have a tough finishing problem, tell us about it. Perhaps we can help you.

MERIT PRODUCTS, INC.

3691 Lenawee Ave., Los Angeles 16, Calif.

For more details circle NED-1052 K8 on enclosed inquiry slip

NEW THREE-WAY PILOT AIR VALVES



. . . Complete new line
. . . Normally open or normally closed types
. . . May easily be converted to solenoid type

Ideal for operating single-acting cylinders. ¼", ⅜", ½", ¾" and 1" N.P.T. port sizes. Compact size, sturdy construction and simplicity of parts assure long service life and neat air system hookups. Choice of actuating valves to load and relieve pilot can be made from Schrader's many 3-way valves. Flow capacities 60 to 400 cu. ft. per minute.

Send for informative literature on these and all your air control needs. Schrader, maker of the most complete lines of air products in the world, has all the answers.

Schrader®

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Division of Scovill Manufacturing Company, Inc.
459 Vanderbilt Avenue, Brooklyn 38, N. Y.

For more details circle **NED-1053 K8** on enclosed inquiry slip

Something much finer in a dial thermometer: finer because it is the bourdon tube type of thermometer at its best...embodies the greater precision and lasting accuracy of the Marsh Pressure Gauge.

Both vapor tension and gas-filled types are available in either distant reading or rigid stem types. In the broad Marsh line you have a complete selection of temperature ranges, case sizes, styles, and finishes.

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Houston Branch Plant, 1121 Rothwell St.
Sect. 15, Houston, Texas

For more details circle **NED-1054 K8** on enclosed inquiry slip

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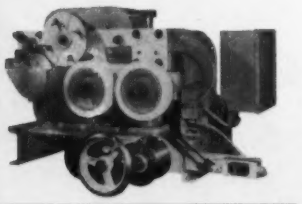

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Production rates and ease of operation and maintenance are astounding. Write today for more detailed information or consultation with Matthews Marking engineers.

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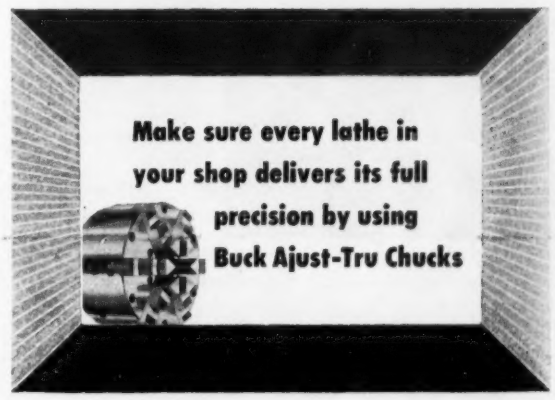

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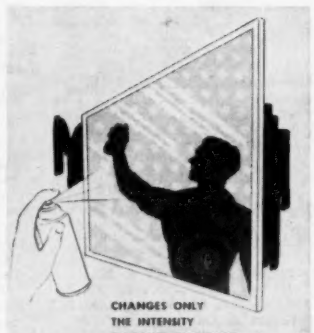
reduces window glare in plants



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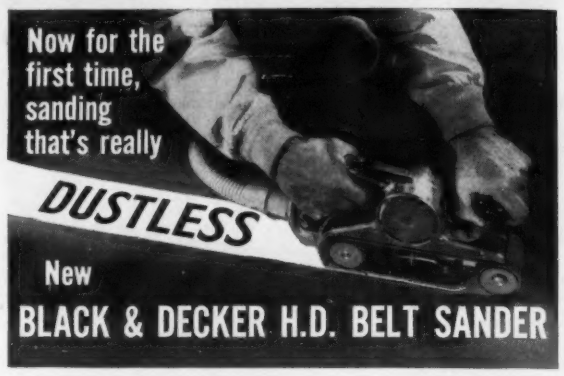

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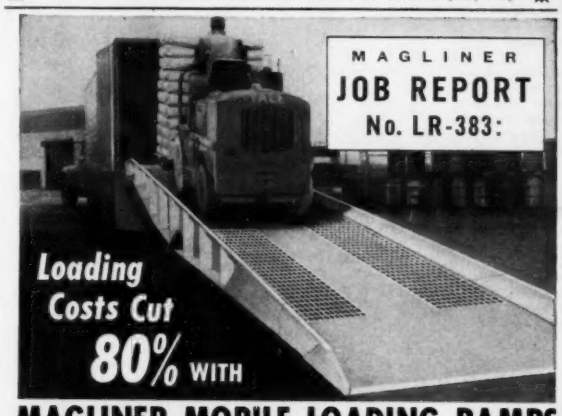

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